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HYGEIA

THE HEALTH MAGAZINE

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HYGEIA

THE HEALTH MAGAZINE

Published by the American Medical Association
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VOLUME 5 — MARCH, 1927 — NUMBER 3

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R. CLARK, professor at the State Normal College of Montana, has been teaching hygiene for more than twenty years. He is especially interested in child and school hygiene and has given numerous lectures and published articles on this subject. DR. PHILIP LEWIN is a specialist in orthopedics. His article is the first of a series that will appear in HYGEIA from time to time on the health value of the dance.

HARLIE GARVER, principal of the high school at Union City, Ind., has first-hand knowledge of the problem that he discusses. DR. VICTOR H. SEARS practices dentistry in an eastern city. DR. FRANK HOWARD RICHARDSON contributes another article of his series on the nervous child. Next month he will discuss nail-biting.

DR. FRED H. ALBEE, a widely known orthopedic surgeon, is the author of an authoritative volume on orthopedic and reconstruction surgery. DR. HERMAN GOODMAN specializes in the treatment of diseases of the skin; he has been a frequent contributor to HYGEIA. Another former contributor is GRACE MARIAN SMITH, who has studied and written extensively on home economics topics.

MILDRED G. DURBIN tells the story of her own experiences in the contagious disease hospital of a middle western city. DR. THURMAN B. RICE is assistant professor of sanitary science at Indiana University school of medicine. ELSIE FJELSTAD RADDER draws her knowledge of dietetics both from years of study at leading universities and from practical experience in her own home. Besides her duties as housewife and mother of two children, she finds time to contribute frequent articles on dietetics to the women's magazines.

DR. L. D. HUBBARD of St. Elizabeth's Hospital, the government hospital for mental disease at Washington, D. C., has written another article on the care patients receive in mental hospitals.

The health play by LUCILLE SISSMAN was acted with success by the boys of a New York City public school.

Contributions to HYGEIA *are considered, and, if accepted, paid for. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to* HYGEIA, *535 North Dearborn Street, Chicago, Illinois.*

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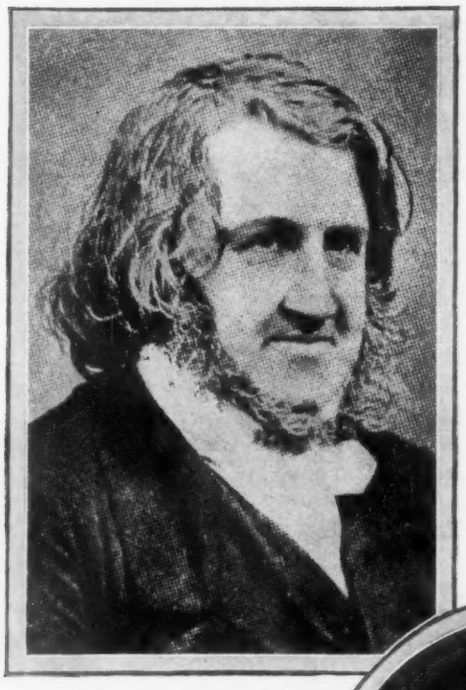
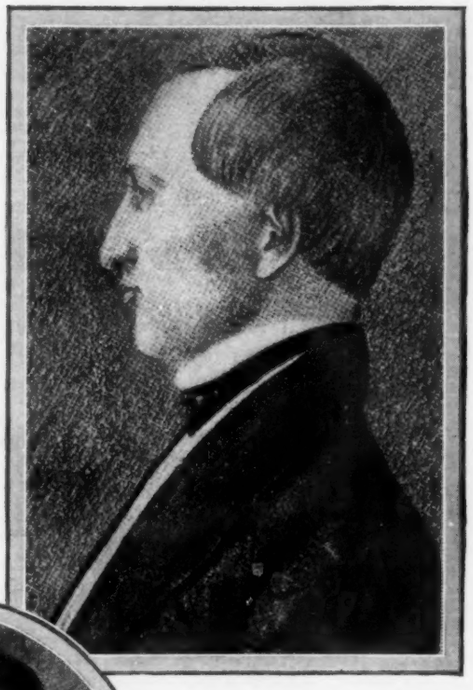


SIR JAMES SIMPSON



CRAWFORD W. LONG

W. T. G. MORTON

HEROES OF MEDICINE

XII. Simpson, Morton and Long

THE story of the discovery of anesthesia has been told several times in HYGEIA. *It is intimately bound with the lives of Sir James Young Simpson, Crawford W. Long and W. T. G. Morton.*

In March, 1842, Dr. Crawford Long of Danielsville, Ga., removed a small tumor from the back of the neck of a patient under the influence of ether.

In July, 1844, a dentist, William Thomas Green Morton, tried the anesthetic effects of ether while pulling a tooth. He was active in promoting the use of this substance and in bringing it to general attention.

On Nov. 4, 1847, Sir James Young Simpson, who had previously used ether in obstetrics, attempted the use of chloroform and published his results a week later.

These discoveries created a new epoch in surgery. It was no longer necessary to rush through operations at lightning speed, or to perform marvelous technical manipulations for the saving of time. Many of the pangs of childbirth were relieved. As stated by Sir Clifford Allbutt, "With anesthetics ended slap-dash surgery; anesthesia gave time for the theories of Pasteur and Lister to be adopted in practice."

From the window of his log cabin home, Adam Henry looked out upon this Montana scene.

The Education of Adam Henry

By R. Clark

UNDER the shadow of a clump of cottonwoods runs a stretch of irrigation ditch, and a rod from there is a three-room log cabin. In this home there was born, fifteen years ago, Adam Henry. He was never christened. The ranch was too far away from any church, and though services were held regularly once every two months in the schoolhouse three miles distant, christenings were never a part of the service.

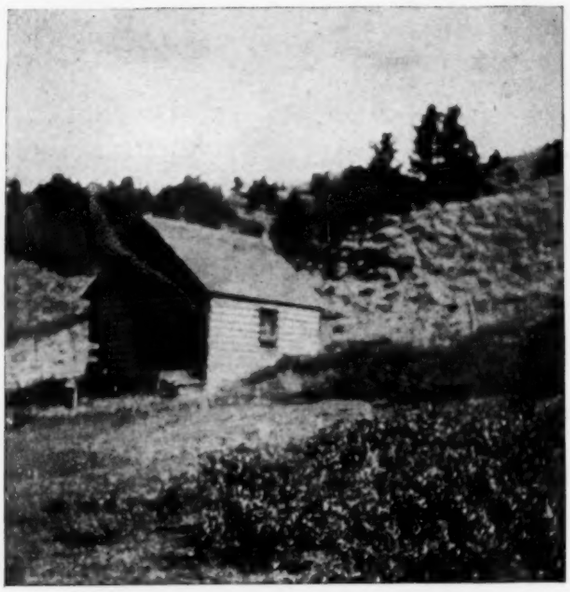
The Henrys named the boy Adam, for he was their first child. Here Adam had had three brothers and two sisters; "had had," for two of them had died in infancy. Doctors were expensive and lived too far away, and the home-made remedies that some neighbors had tried on the children and the three or four patent medicines that were always kept on hand did not work in the case of Adam's brother and sister.

Adam himself was sickly, much to the surprise of his parents, who, when he was 2 years old, gave him the best pork and beef they had, and when he was weak gave him tea and coffee to stimulate him. Then there were other teas supposed to have wonderful therapeutic value: boneset, treasured by his grandmother from her eastern home, and sassafras, which the whole family drank every spring for the blood. It helped to wash down an occasional dose of sulphur and molasses, also for the blood.

There were seasons of the year when the entire family was sickly, generally in the spring when the water was turned into the irrigation ditch. It was often easier to drink from this than to pump water from the well. The well was at least 2 rods from the house and close to the barnyard.

It was a matter for family discussion as to when Adam should begin his schooling. His father was for keeping him at home till he was 8, so he could have his son's help on the ranch. His grandmother hoped the boy would be a lawyer or doctor or even a preacher, and therefore declared he ought to start to school on his fifth birthday. However, there was a compromise. When he was 6½ his father drove every morning for five months in the year to the little brown schoolhouse and dropped Adam there. However, Adam walked the three miles home each evening and had to hurry in order to help his father with the chores before supper.

Adam's appetite was not good at supper time. "Perhaps he eats too much for lunch," his mother would say. Yes, his lunch was big, two pieces of pie, two pieces of cake, three biscuits, two or three pickles; about the same menu day after day. His mother was not a qualified cook but she did not know it, and the family digestion had become accustomed, possibly hardened, to her cooking. The mother was busy. There was always a baby, generally sickly, to care for, so she could not give time to Adam's lunches. Generally, if not too busy, she washed out his tin lunch pail.



Adam's first little brown schoolhouse.

His teacher? She came from the city, poor girl, but she had to do something, and since she had taken a year or two of high school work, why not teach? In personal appearance she was not especially attractive. What teacher of a school of that type, at $65 a month, would be neat? To her, temporary pins were less trouble than permanent buttons. Of course she could not, or did not, require neatness of any kind in the school building or outbuildings or the yard or in the dress or hands and face of the pupils or in their written or spoken words. She had a beau and was to be married the next year.

But she was kindly and interested in her pupils, interested in their aches and pains. She had a first aid cabinet, supplied with a bottle of pain killer for the pains and headache tablets for the aches. She frequently used these tablets herself, so why would they not be good for the children? The children grew to like them, and Adam was dared more than once to take two spoonfuls of pain killer at once, without any water. Whew!

Adam missed forty-eight days of the six months' schooling, partly because his father was too busy to take him, but principally because he was too sick to go. God spared his life, but five of his schoolmates, by visitation of Providence, died during the teacher's "incumbrancy." She had to do something, you know, so why not teach?

John Henry, Adam's father, was restless, never had good luck, never stayed on one ranch more than a few years. Consequently, the following three years Adam attended another country school, when his health permitted. In those four years he had six teachers, two "widow ladies," three—if we may so call them—flappers from the neighboring city, and the sixth, who taught for three weeks, the feebleminded son of a local member of the school board. Each one of the lady schoolma'ams had to do something, so why not teach?

The Henrys moved again. The new ranch was no better, but the school! Adam had never seen such a building. Over the door were the words, "Superior School." To Adam it surely was a superior school. A white frame building and only one schoolroom, but there was a coat room for the boys and another coat room for girls. Then there was another room in which they had their lunch, with a little oil cook stove that the teacher and the girls kept so clean it never got smelly. On that stove, every day, they cooked something for a warm lunch.

When Adam had been going to this superior school for less than a month he was bringing a different kind of a lunch. Instead of hard, cold biscuits there were nice white bread and whole wheat bread sandwiches. For had he not told his mother about the sandwiches the other boys brought? And Adam's mother could make even better bread than the other boys' mothers made, when she took time.

The teacher, in the health talks that she gave to the entire school twice a week, had discussed what were the best kinds of sandwiches, and Adam's mother made four of the seven best kinds. The children decided that cup cakes and ginger cookies were better than pie, and apples or oranges better than pickles. The tin lunch pail no longer went to school.

Those health talks, how the children enjoyed them! Why, Miss Best even showed them one day how to blow their noses, one nostril at a time, and taught them that they must each one have a handkerchief, a clean one, even if it did make a few extra pieces of washing for the mothers. There were talks about food and about drinking clean milk—it was hard for Adam to give up his morning cup of coffee—and clean water. They were told that they must wear clean clothes, and their hands and faces

must be clean. It sometimes seemed to Adam Henry as if his teacher must have a very clean mind, as if almost everything must be clean. The best part of it all was that the children wanted cleanliness and formed the habits of cleanliness.

Then there were the books the teacher had on her desk that they too could read, at the reading table ("Do tables read?" Adam asked her, with a little wink), and a magazine or two on athletics, which Miss Best's brother, a college athlete, sent her from time to time.

One fall day the county health nurse visited them. Adam was a bit scared at first, but after her first visit they begged her to come again and she came and stayed a week, visited the homes, talked to the mothers about how best to care for their babies and the older children, and held two meetings in the schoolhouse to which the mothers and fathers all came.

To Adam it surely was a superior school.

Was it the teacher or county nurse, or was it Adam himself who gradually brought about a reeducation of the Henry family? They gradually came to believe in the value of fresh air, of clean water from a clean well, of less rich food, of more butter and less mutton fat and sausages, of more conveniences for the mother, such as an arrangement for running hot and cold water in the kitchen, and a specially built-on bathroom, for Adam and two of his brothers belonged to the Health Crusaders—he was already a Knight—and they each had to take a bath once in so often.

No longer were the principal summer inhabitants of their home the flies. The family burned what little garbage there was; Mrs. Henry was a thrifty housewife, and they screened all the windows and outside doors.

Adam's father was beginning to feel prosperous. At the family supper table one evening —they now sat at the table much longer than they used to, for in one of the health talks Miss Best had convinced the children that it is unhygienic to rush through a meal and bolt one's food—he remarked that he never felt better, never felt happier, never felt so like working hard, never before could think so straight and clear, as in the last six months. He added, "I don't know whether it's the altitude or your mother's cooking."

Adam's grandmother piped up, "That's so, John; why, I ain't had an attack of the misery for goin' on two months and I ain't teched a drop o' medicine for that long neither."

"Say, mother," interjected one of the boys, "Miss Best said today that we three kids haven't missed a day of school for seven months. What do you think of that! Some record!"

The education of Adam Henry was resulting in the education of the whole family; he did not know it, and neither did the educator, Miss Best, know it. Oh, the blessedness of the quiet, unobtrusive influence of the teacher of children!

Adam Henry's education was well begun. He had incorporated and inpsychated, if there is such a word, the three fundamental essentials for a healthy, efficient life: knowledge, desire, habits.

His education continued. The family moved into the city. Adam became an active member of the Junior Red Cross, an active seller of Christmas seals, "to help the poor sick kids and to make the country healthy," he said. He studied physiology and hygiene, thanks to another Miss Best, who was not teaching because she had to do something. She taught a great deal of practical hygiene. They had health plays and health drills, as well as health talks in the school. He was taught by a teacher who knew children, knew her subject, knew such books as Theresa Dansdill's "Health Training in the Schools."

To the teacher the children were indebted for knowledge, health desires and habits, and through her pupils the homes too were educated. Each one of her Adam Henrys was educated into a strong, virile, efficient citizen upon the foundation of health.

Four poses of Miss Harriet Hoctor, one of America's most beautiful dancers. In making a career of ballet dancing, one should begin at the age of 6. A child of 4 is not too young to benefit from the training.

Ballet Dancing

From the Point of View of the Orthopedic Surgeon

By Philip Lewin

BALLET dancing may be undertaken as a career or simply as a healthful pastime. It is from the latter angle that it will be viewed in this article. Acknowledgments are made at the beginning to Miss Merriell Abbott of Chicago for the technical discussion of ballet dancing that is a part of this article.

Through ballet dancing the girl may develop and improve in concentration, poise, sense of balance, quickness and accuracy of thinking, coordination of mind, muscle and body, and sense of rhythm both of music and of movement. Added to these mental health benefits is the important factor of enjoyment.

Physical health benefits are found in improved circulation and digestion and in development of muscle (of both the heart and the skeleton), ligament, tendon and bony skeleton. There is a fundamental law in orthopedic surgery that bones, and therefore joints, depend for their internal and external architecture on the strain and stress to which they are subjected; in other words, the function to which a bone is subjected determines its form. The excellent function to which the body is compelled to conform in ballet dancing results in improved form. It is physically impossible to maintain a position such as the arabesque unless one assumes perfect posture.

How the untrained (left) and the trained foot (right) points the toe. Pointing the toe is a valuable exercise for strengthening the arches.

Improvement in body symmetry, carriage, posture and physical attitude is great. Proper form is developed in the calf, thigh, arm and back muscles. In fact, constant care must be exercised by the instructor or a detrimental overdevelopment of the muscles of the calf may occur. Children who are overweight are benefited by the physical activity of ballet dancing, for it has a tendency to prevent the deposition of fat. The thin child is improved by the general stimulation of bodily functions, especially circulatory, muscular and digestive functions.

The instructor in ballet dancing needs excellent training, including a study of the human body, preferably by personal dissection, a keen knowledge of the psychology of the child and of that branch of orthopedic surgery called posture.

The various positions of the ballet place unusual strain on the longitudinal arch of the foot, but this is mini-

Back bend with leg extension.

Arabesque. It is physically impossible to maintain the arabesque position unless one assumes perfect posture.

Leg extension position, showing good muscular control.

mized if the instructor teaches the child to transmit her weight to the outer borders of her feet. "Pointing the toe" is one of the most valuable exercises for improving the power of the supporting structures of the longitudinal and metatarsal arches.

As an auxiliary to sunlight, fresh air, cod liver oil and phosphorus, proper hygiene and dietetics, ballet dancing is valuable in the correction of such conditions as knock-knee and bow-leg. These conditions are usually due to nutritional disturbances, the most important of which is rickets. Prof. Leonard Findlay of Glasgow, Scotland, has emphasized among other factors the value of exercise in the prevention and cure of rickets. The condition of back-knee can be markedly benefited by ballet dancing.

It is of great importance in ballet dancing that the internal semilunar cartilage of the knee be protected by constant care; it is relieved of undue strain by transmitting weight to the outer border of the knee. This structure is not bone but cartilage and is situated on the inner surface of the knee joint between the upper border of the shin bone and the lower end of the thigh bone. The position of greatest strain is assumed when the knee is flexed and undue stress is placed upon the inside. When the cartilage is displaced or dislocated the child experiences severe pain; she may hear a click and feel something slip out of place. She may be unable completely to extend her knee. The position of outwardly rotating the thighs, the so-called "turned out" attitude, may be injurious unless the weight is distributed to the outside.

Good posture. The arms posed forward to show the lumbar region.

Ballet dancing offers valuable training for the bones, ligaments and muscles of the back. It helps posture beyond measure. Mild or at times severe degrees of forward and backward curvature, such as round back, round shoulders and sway back, are greatly benefited. Mild cases of lateral curvature, or scoliosis, are improved materially by the muscle training, although both of these types of disturbances should be treated by orthopedic and medical gymnastic measures.

The head and neck, so important in one's appearance, are benefited greatly by ballet dancing. I have a patient who was born with wryneck, or torticollis. After a simple operation and the wearing of a plaster of Paris cast for eight weeks an excellent correction was obtained, but after training in ballet dancing her neck became an object of wide admiration and the name of "swan neck" was applied to her. The arms and shoulders, too, improve in grace, coordination, rhythm and form.

A child of 4 years is not too young to benefit from ballet dancing. She can be taught the simple hop, skip and other combinations. From the standpoint of a career 6 years is the proper age to start. It is the unusual child that should be allowed to attempt toe dancing before she is 10 years old.

Ballet training is the foundation of all branches of dancing. Through ballet work the muscles may be properly developed and the balance and poise necessary in any kind of dancing is obtained.

Of the various types of dancing no lengthy discussion will be given here. The Russian ballet training is preeminent as compared with the Greek, the Italian and the Spanish. The system known by

Hand stand balance.

the name of Goodieff is remarkable for the training in concentration, coordination and endurance. Eurhythmics is performed bare footed; and it is said to be more natural. The East and West Indian types of dancing are interesting. Japanese and Chinese ballet dancing afford a valuable type of rhythm.

One cannot help but be impressed with the comparative benefits to be derived from a training in ballet dancing over that received in many other courses of study. In none of the other arts, such as piano, elocution, dramatics or voice culture, are all of the muscles of the body called into play as in dancing, nor is the child given the opportunity to express herself as naturally or as rhythmically as in ballet dancing.

Caution must be observed in allowing "warm" muscles to cool rapidly and in subjecting "cool" muscles, ligaments and tendons to strain without going through the preliminary warming up and stretching processes. Gentle massage of the muscles after activity is valuable in removing toxic waste products and preventing muscle disturbance.

A flexible back.

Acrobatics may be a valuable auxiliary to ballet dancing. It must be taught by a specially trained instructor, who must give every child individual attention in order to prevent injury. Back bending stunts must not be indulged in too strenuously or too constantly. In children with thyroid gland disturbance acrobatics and sometimes ballet dancing are to be avoided.

The Child as a Health Unit

IN HEALTH work among school children one must guard against the tendency to consider the children as so many cases of diseased tonsils, flat feet, malnutrition, dental caries and the like. While each child can be divided into a number of physical structural systems, such as the skeletal, respiratory and nervous, in life all these systems are coordinated into a single functioning unit—the whole child.

Medical inspection that deals only with sections of a child is not the equivalent of medical examination and cannot interpret the whole child as a health unit, says Dr. Ira S. Wile, writing in the *American Journal of Public Health.* Medical inspection indicates marked deviations from the theoretic normal child, but these deviations have been overstressed, thinks Dr. Wile.

Small Defects Are Often Disturbing

Children respond in different ways to the same apparent defects. Then, too, many conditions that are real defects are not handicaps to health, while other defects, insignificant from the standpoint of disease, are devastating to mental health, comfort and happiness and greatly disturb the functioning of the child as a health unit.

To the teacher, a report of the child's physical defects is valuable only as it explains their effects on his function. Retardation in school may be due to a lack of body harmony rather than to a deficiency in intelligence. Running ears are more important to the teachers than flat feet, but a permanent hairy mole on the face may be more distracting and interfere more with study than a stiff knee, in Dr. Wile's opinion.

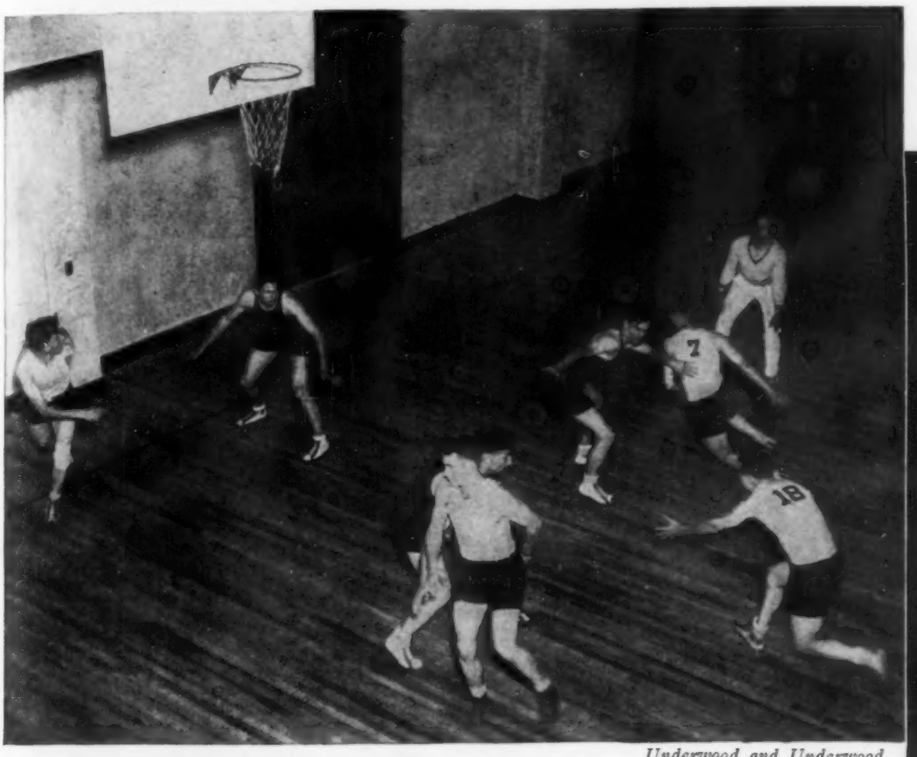
Among the conditions affecting the school child's health and progress, hygienic elements have an important place. In this connection more than mere light, ventilation and height of seat and desk must be considered. The personal relations between the teacher and pupils result in another kind of hygiene. The effect on total health values of a dyspeptic, sarcastic or nagging teacher can be much worse than the effects of a large number of simple anatomic handicaps that are now quite generally considered of first importance.

Relations between Teacher and Pupil

If one considers unity in health as the fusion of the several aspects of the child's nature that enter into the manifestation of health, one gains a much broader concept of total health.

Are Basketball Tournaments Harmful?

By Harlie Garver



Underwood and Underwood

In the central states high school basketball is the king of sports. The season reaches its climax with the state and national tournaments.

AS THE basketball season advances and approaches the grand climax of state and national championships there is a more and more insistent demand on the part of sane-thinking people that a satisfactory answer be found to the question, Are basketball tournaments as now conducted harmful to the health of our boys and girls?

In its highly specialized form basketball is a comparatively recent game. Within a decade the high school players went among the townspeople and business men selling tickets so that the boys could buy suits, and the purchase was considered a donation. Nobody ever went to the games, and the boys usually played in a dimly lighted attic in which no suitable seats were provided. Lockers and showers were almost unknown. The coach was usually a volunteer from the faculty, and competent officials were confined to the college games.

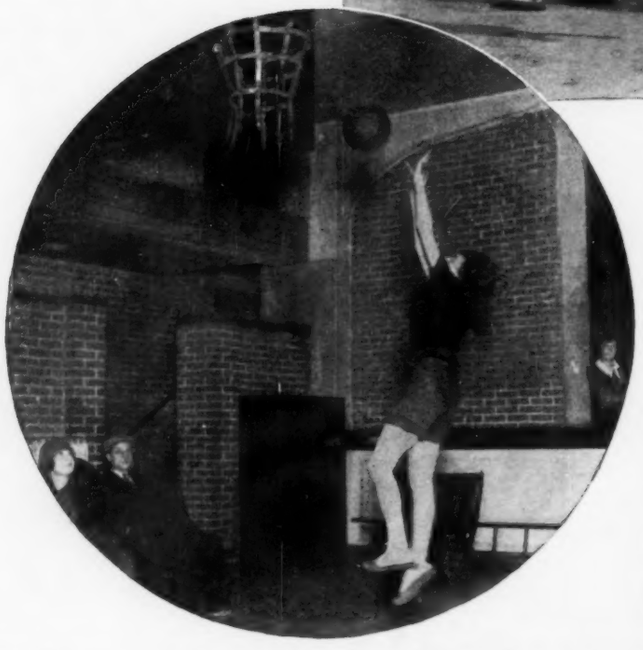
But all that is changed. In the central states at least, high school basketball is now king of sports, and in many instances the only form of athletics. The same game is played on the same floor, but the seating capacity of the gymnasiums has increased until in some rather sizable towns the hall seats more than the population of the town. In some cases the next generation will be paying for the community gymnasium.

The construction of mammoth floors means a tremendous pressure to pay for the building through gate receipts; this necessitates a high priced coach who can produce a winning team. The best of coaches cannot turn out winning teams unless they are favored with suitable material and with boys who can and will train carefully for the game. But mere physical perfection of material also may mean little. Some of the smaller township schools can furnish the most stalwart candidates but fail to have winning teams because of insufficient training and of poor coaching.

The ultimate result rests on the training of the individual athlete. Some schools start the season as early as October 1. Many of them use the gymnasium at least two hours daily for five days of the week. Until the season closes, about

Girls as well as boys train for the strenuous championship games at the end of the basketball season. Some teams play from six to twelve games in two weeks.

Underwood and Underwood



March 1, each boy must observe strict training rules as to diet, sleep and daily habits, in addition to keeping up in his studies. The players are so closely watched that the average basketball coach knows more about the physical condition of his players than do their own parents.

But what of the tournament itself? Usually the playing begins with counties or sections, which play from eight to sixteen teams to a winner, the games usually occupying two days at the end of the week. The two teams that play in the finals must play in a maximum of four games, which are usually shortened from halves of twenty minutes to those of twelve or fifteen minutes.

The next week the winners play in a district comprising probably from eight to sixteen sections or counties, the same procedure being used to eliminate all but one or two teams. In most cases this takes the teams up to the state contests played the third week. Thus it is possible for a team, in a little more than two weeks, to play from six to twelve games, somewhat shortened as to length.

An extreme of this procedure is the so-called regional or national tournament, in which forty or fifty teams may be entered. In these championships the teams play continuously to a winner. This may mean eight or more games without a rest of more than twenty-four hours, and probably three games the last day.

Some independent tourneys are divided into classes, such as the 110 pound and 120 pound divisions. In such competitions there is an effort to find boys who can make the "weight," so they are often dieted down to make a certain class. The result is that they go into play in poor physical condition, especially when it is considered that the boys are growing and need all the nourishment they can get. This is not the usual procedure in tourneys, however, and the problem should not be dealt with on the assumption that even a small proportion of games are played on such a severe basis.

The question is, As the tourneys are usually played, are they dangerous to health?

Such attempts as have been made to answer this question indicate that there is as yet no conclusive answer. One of these studies was carried on recently by a committee of the legislative body of the Indiana high school athletic

association. The committee sent out two statewide questionnaires, one to high school principals and another to a carefully selected group of physicians. By means of the first questionnaire, among other things, there was an attempt to discover whether high school boys are spending too much time in the gymnasium. It was thought that an excessive number of hours spent in practice and in games would be reflected in the standing of athletes in their studies. In a statistical study of the grades and hours of over 3,000 players it was found that there is no reason for believing that basketball has any noticeable effect on school grades. The amount of time the boys used in basketball failed to have a marked effect on their studies.

In their opinions as to tourneys, the physicians failed to render a conclusive verdict. They seemed to object to those meets that involved four games for a team in two days, but the opinion was by no means unanimous. They were agreed, however, that if a direct study of athletes in basketball tourneys was carried through a number of years, the findings would be conclusive enough to justify the effort required for such study.

Indiana to Make Study

As a result of this opinion the Indiana high school athletic association will make at the state final tourney in Indiana this year the beginning of such a study. It is the plan of the association to carry through the tourney a physical examination of the players, using physicians to make tests that will give the required indications as to excessive physical exertion and harmful after-effects. It is hoped that the study can be made so comprehensive that it will be possible eventually to answer important questions as to the harmfulness of such meets.

At least two investigations along this line have been carried on in the past, with urinalysis as the basis, but the results were conflicting. Since the studies involved a small number of cases, the findings may not have been comprehensive enough to yield figures that were reliable.

To yield results that will satisfy educators and physicians such studies as are now contemplated should do two things: first, embrace such a number of cases and extend over so much ground that the data will be statistically reliable, and, second, cover such a period of time that individual biographical studies can be made to reveal the tendency toward after-effects in later years.

Must Be Properly Handled

Perhaps basketball tourneys, if properly handled, are not so destructive of health as many have been led to believe. In many respects basketball is an ideal game. Because of the "game" element it can be made an instrument of mass physical education in a way that no gymnastic drills can function. It is played indoors, and so does not depend on weather conditions. Besides this, it has an important by-product in the development of wholesome school and community spirit.

The encouraging phase of the situation, however, is the fact that school officials and physicians are getting together in a sincere effort to find out the facts. With this much progress made we may soon be able to satisfy ourselves as to the safety of what to many communities is the most talked-of yearly event, the basketball tournament.

Your Third Set of Teeth

A Discussion of Artificial Dentures

By Victor H. Sears

The First Set

Photo by H. Armstrong Roberts

AS MORE than half of the present day Americans are wearing or will in the future wear sets of artificial teeth a more general knowledge of the subject will spare suffering, both physical and mental.

Perhaps no other human restoration can so satisfactorily replace lost parts, either from the standpoint of appearance or of usefulness, as the restoration of teeth. Frequently the teeth may be replaced with such fidelity to nature that the eye fails to detect the substitution.

On the other hand, nature did not intend that the gums should bear the pressure during mastication, and only under favorable mouth conditions is it possible for a person to approximate the usefulness of good natural teeth with artificial substitutes. Even then a high degree of skill and the careful use of scientific apparatus are essential to the construction of dentures that will approach the efficiency of good natural teeth.

Teeth Must Harmonize with Face

There is as much difference in mouths as there is in faces. For this reason it is not possible for all persons to have equally satisfactory dentures made by the same operator, and no definite procedure can be determined on without a consideration of individual mouth conditions.

Thorough examination, including study casts, facial measurements, outline records and sometimes photographs for the purpose of more accurately planning and carrying out suitable treatment, should be made according to the needs of the individual case. This service is especially valuable in cases in which the teeth are to be extracted and restored with artificial substitutes similarly placed and resembling the natural teeth, thus retaining or improving the characteristic facial expression.

Frequently study casts are necessary to determine the extent of mouth preparation and the position of teeth. For this reason teeth should not be extracted until the necessary examination has been made by the dentist who is to construct the dentures. In cases in which it is desired to substitute teeth of the same size, form, hue and arrangements, it is advisable to make impressions of the teeth before they are removed.

When the teeth are surgically removed and when the ridges are properly prepared, there is less danger of persisting tender areas, the gums heal more quickly, and dentures are more comfortable than is ordinarily the case with simple extraction. Furthermore, there is no pain during the operation while the tissues are anesthetized, and generally less after-pain than is the case with simple extraction.

Whenever teeth are "just pulled" in the old way and the ridges left with all the holes and projections of bone, it is sometimes impossible to make a set of artificial teeth that will be either pleasing to the eye or comfortable to wear. If infection is present at the roots of the teeth, there is the further necessity for removing enough of the bone to gain access to the parts involved and to remove all dead or diseased bone. If the reason for extracting teeth is to preserve or to restore the patient's health, it is essential to remove the diseased bone as well as to remove the diseased teeth.

No Need of Going Toothless for Weeks

Dentures should be placed in the mouth as soon as possible after the natural teeth have been extracted. There may be a variable amount of shrinkage of the supporting tissues immediately after placing the first dentures, even though the teeth have been out for several

A Good Second Set | A Poor Second Set | The Third Set

months. For this reason dentures should be refitted if the amount of shrinkage is sufficient to cause them to become loose, or new ones should be constructed.

Aside from the fact that one is spared the embarrassment of appearing toothless among his social and business associates, immediate restoration has the further advantage of preserving the correct relation of the jaws to each other, retaining the proper relation of the chin to the nose, preserving the tone of the muscles, preventing the cheeks from falling in, and avoiding a possible damaging effect on the joint just in front of the ear where the lower jaw hinges. It is possible by modern methods to construct dentures before extraction so that they may be worn immediately.

The best artificial teeth are made of the finest grade of porcelain that science can produce. They are made in a large variety of sizes, forms and hues and the natural teeth are closely imitated so that, with modifications, they may be made to harmonize with any type of face.

Size, Form and Hue Are Important

In order to select teeth that will be most pleasing and in harmony with any particular face, three factors must be taken into consideration: size, form and hue. In determining the most appropriate size and form of the teeth in a given face one must do so in consideration of the relations that should exist between the size and contour of the face, mouth and teeth. Teeth that are too large or too small are more or less disfiguring, whether natural or artificial; likewise, angular teeth in a delicately rounded face, or square teeth in a tapering type of face, produce disharmony. Some teeth should be lighter at the biting edge than the gum line, and some teeth should have a greater depth of color than others although the general effect must be neither too light nor too dark.

Nature sometimes gives a person teeth that are too large or too small or that are arranged in such a manner as to destroy the harmony between teeth and face, just as people have noses, eyes and mouths that are too large, too small or otherwise out of harmony with the rest of the face. It is clear, therefore, that if the object of the dentist is to produce the most harmonious effect in any case, he must sometimes disregard the type of natural teeth that were present. It is a fact that many persons are better looking with artificial dentures than they were with their own teeth.

Learning to Use the New Teeth

Obviously the principles involved in the selection of teeth as to size, form and hue, as well as to their arrangement for appearance, speech and mastication require special training and considerable experience to assure their correct application. For this reason it is clear that the operator's judgment should be relied on in large measure to produce the best results.

The teeth are first arranged on temporary plates and are tried in the mouth. At this time the patient and the operator should agree on the size, form, hue and arrangement of the teeth. At this time it is possible to make changes, but any changes made after the dentures are completed involve unnecessary trouble and additional expense.

Artificial teeth are not used in the same way as natural ones. If a person is about to wear dentures for the first time, it is difficult for him

to gain any clear conception of the experiences in store for him. He should not expect to use comfortably the artificial substitutes for natural teeth until nature has had sufficient time to adapt itself to the new conditions. Artificial teeth always feel big and cumbersome at first and the tissues seem to rebel at their presence, but gradually the substitutes become more comfortable and useful. This period of learning to tolerate and use dentures is something that every one must pass through in order to master the art of wearing them. The length of time varies according to a person's individual mouth conditions, general state of health, age and ability to adapt himself to new conditions.

Most people learn to eat very well with dentures, but no one should expect artificial teeth to be fully as serviceable as good natural ones.

One is justified in wearing dentures purely for the sake of appearance in cases in which mouth conditions may be such that dentures cannot be made very serviceable in mastication. Glass eyes are worn without any thought of their utility, and while dentures should in all cases be more serviceable than glass eyes, a person should not expect great efficiency immediately upon replacing natural teeth with artificial ones.

In eating it will be found that thorough mastication can be more readily accomplished at first if the food is taken in small portions and if the chewing is slowly done on both sides at the same time. In biting off food there will be much less danger of dislodging the dentures if inward pressure is made on the front teeth instead of an outward pull as one usually makes with the natural teeth.

During the first week or ten days one should wear the dentures day and night, after which time they may be left out at night unless the person is otherwise instructed. All mouths are not alike in their reaction to artificial teeth and the judgment of the dentist should be relied on in each case.

A person should not attempt to chew any but the softest foods until the tissues or gums have become sufficiently accustomed to pressure of the dentures. Bread is hard to chew. The following foods are recommended:

Well cooked cereals, such as corn meal, cream of wheat and rice.
Eggs, boiled, poached or scrambled.
Stewed fruits, such as peaches, apples and pears.
Fresh fruits, such as bananas, peaches and oranges cut into small pieces.
Soups, containing rice, spaghetti and vegetables.
Cooked vegetables, such as string beans, potatoes, spinach, asparagus tips and tomatoes.
Uncooked vegetables, such as sliced tomatoes, finely cut lettuce, parsley and water cress.
Fish, broiled, baked or boiled.
Cottage cheese.
Milk toast, with butter.
Desserts, such as custard, ice cream and rice pudding.

One may drink sweet milk, buttermilk, malted milk, egg-nog and orange juice.

There is a tendency on the part of many persons to show themselves and others that they can chew as well with artificial dentures as they could with their own teeth. This may soon lead to sore mouth or wasting away of the ridges, or both. The wearer of artificial dentures should reconcile himself to the habit of avoiding all foods that require vigorous chewing. This is not always convenient but will safeguard the supporting value of the ridges and make the dentures serviceable for a greater number of years. One can be just as well nourished with foods that do not require much mouth grinding as one can with foods that overtax the supporting ridges.

Artificial teeth are made of porcelain and should be handled with great care. They should be brushed after each meal and before retiring at night. A special plate brush or stiff hand brush should be used, with baking soda as a cleansing agent. One should never use coarse scrubbing powders or hot water. If there should be any odor to the dentures, they should be allowed to stand for a few hours in a glass of water to which has been added a half teaspoonful of sulphurous (not sulphuric) acid (H_2SO_3).

In case of breakage, it is usually possible to repair a set of teeth satisfactorily.

Once made, dentures do not change their shape, but there may be a shrinkage of the supporting ridges, and in time dentures that fit when first made become loose. This is not necessarily due to faulty construction, but is a common result of nature's work. When dentures become loose, they should be refitted or new ones constructed. The length of time that they will continue to fit depends on the rapidity of absorption, the absorption usually being more rapid with the first dentures than with subsequent ones.

The most important single factor in preserving the integrity of the supporting ridges as well as in securing comfortable efficiency is the factor technically known as balanced occlusion. This means that the chewing teeth are so arranged and ground that they make simultaneous contact on both sides in any of the many habitual chewing positions that the lower jaws may assume.

If in any of the positions of the lower jaw there is some tooth that strikes before the others, the dentures are unbalanced; and if they are used in that position destruction of the supporting ridges and looseness of the dentures will result.

The dentist's services do not end with the placing of dentures. Careful inspection of the mouth and teeth at intervals, with adjustments when indicated, is of value in safeguarding the future health and supporting value of the jaws.

The Nervous Child

III. Thumb-Sucking

By

Frank Howard Richardson

MUCH has been said about thumb-sucking in the nervous child that, intriguing though it may be from the theoretical point of view, is for practical purposes worse than useless. For example, some writers assert that this act is an autoerotic activity. Others trace in it a regression to the habits of infancy on the part of an older child who unconsciously desires a return to the relatively simple and less exacting conditions of an earlier age. Still others regard it as akin to the somewhat infantile pleasure that the pipe-smoker derives in pulling at his pipe!

If any of these theories are suggestive or helpful to the physician or to the parent in dealing with this habit, they are here for the taking and may be utilized as desired. If they do not seem to be of value, the reader need have none of them. For the object throughout this series is helpfulness in actual practice, not theoretical speculation.

Should Act before Habit Is Formed

Thumb-sucking or finger-sucking, like some other traits seen in nervous children, is apparently quite natural and normal in the infant. He finds out for himself that putting his whole hand, certain fingers or, most convenient of all, a thumb into his mouth, is rather pleasant, perhaps because of one of the theoretical reasons just advanced; perhaps for some entirely different cause. This takes place by accident, in the course of his more or less bungling tentative explorations and experimentations with various movable parts of the little machine that he is learning to operate by the excellent, highly practical method of trying to see how it works.

This is the time when an ounce of prevention is worth several pounds of attempted cure, as any one who has ever had to battle with thumb-sucking in an older child can testify to his sorrow.

If the simple removal of the offending member from the mouth is not sufficient to nip the habit in the bud, or if it has when first observed already taken hold strongly enough to withstand this simple measure, the mother had better resort at once to the employment of elbow cuffs, or splints. These are easily made of flexible cardboard of moderate thickness, rolled to form cylinders, and held in this shape by paper clips. They are slipped on the arms over the shirt sleeves and under the dress sleeves and are kept from slipping down over the wrists by turning the shirt sleeves up over the lower edges, like cuffs. They are kept from slipping up above the elbows by the armpits. They keep the little arms from bending, which is of course an indispensable preliminary to bringing the hands up to the face. They allow every other variety of arm motion, however; and if they are made loose enough not to bind they cause no discomfort after the initial awkwardness has passed off.

The early breaking of this habit may save months or even years of struggle. For this habit, once definitely fastened on a child is constantly returning in later years, whenever there is a slight let-down in the youngster's tone, as a result of physical ill health or emotional stress. The prevention of impaired appetite, deformed dental arch and whole lower face, and misshapen thumb, not to mention the feeling of inferiority that obsesses the older child who has not succeeded in ridding himself of this humiliating badge of infancy, is well worth taking into consideration at this crucial point.

Finally Becomes a Craving

The urge of the confirmed thumb-sucker to indulge in his compulsive act is not far removed in degree of intensity from that of the drug addict for his drug. It is of no more use to shame him, to argue with him or to punish him than it is to attempt to cure a drug addict by mere detention, or to get rid of antisocial tendencies in the adult offender by merely imprisoning or otherwise punishing him. Something constructive is necessary; and it may require a deal of careful thought, fortified with more than a little patience and self-restraint on

the part of the parent, before a long-time sufferer from thumb-sucking addiction can be considered safe from a relapse.

In the older child who is a confirmed thumb-sucker most of the time-honored old wives' remedies will have been tried in vain. Quinine, strychnine or asafetida smeared on the thumb have been licked off, apparently with avidity. Adhesive tape plastered round the offending member bears testimony to its ineffectiveness by the moisture and dirt that have accumulated on it. Various mechanical devices for keeping the thumb out of the mouth will have been employed without result, such as the aluminum mits that are so extensively advertised, or the complicated rings and chains that are supposed to render the thumb a disagreeable object after it gets into the mouth. Still another ingenious plan aims to destroy the suction that is supposed to constitute much of the pleasure of the act, by means of a short piece of rubber tubing strapped along the thumb with adhesive tape, which lets in air and so destroys the partial vacuum. Any of these that have not already been tried may be employed, if it is desired to give them a test. While one or the other may be successful at times, not much is to be hoped for from any of them in the case of the really nervous older child. The only device that seems really to give almost universal service is the elbow cuff, which has been described. This will in many cases have to be used eventually, before results can be obtained.

Confidentially Discuss the Habit

In the case of the older child, in whom restraint is manifestly undesirable if not actually impossible, what is to be done for this habit, in addition to doing all that can be done to correct the general conditions that have placed him in the class of the nervous child and that are serving to keep him there? Is there anything that can be done toward a specific cure?

Perhaps the most hopeful course to pursue is to find the person who is on the nearest and most confidential terms with the youngster and to induce him to bide his time for a chummy, heart-to-heart talk. Such a session should be not a formal, cut-and-dried "sit-down" occasion, but should if possible take place during a hike, picnic or other excursion, when the child is thoroughly enjoying himself.

On such an occasion, the talk should be led around to the subject of habits in general. The youngster may be encouraged to speak out his mind with regard to what he himself thinks about his own thumb-sucking and to give his opinion as to similar habits among his friends who have become conspicuous in this way.

Should Not Try to Shame Thumb-Sucker

Such a talk will clarify the thinking of the adult who is honestly trying to help the child, but who is so frequently quite at sea as to the attitude of the child toward his habit. Its effect on the sufferer himself (for he is a sufferer, sometimes to a degree out of all proportion to what we adults would consider commensurate with his fault, if we could but see behind the impassive little face that masks his real feelings) may be well-nigh curative in itself. In any event, it gives him the knowledge that he has a friend who is genuinely interested in helping him throw off this badge of early childhood, something we may rest assured he is most anxious to do, no matter how successfully he may have camouflaged this desire under a defensive assumption of indifference. At the same time, it enables him to get an objective view of himself such as he has never had before. This in itself is bound to strengthen him in his attempts to rid himself of this most obstinate habit.

Whatever else we do or do not do, let us not attempt to shame the child out of his obsessive act. It is quite beside the point for us to attempt to justify this ineffectual measure by saying that "he needs to be told what other people think of him." Not only does he know this already, but in all probability he knows it far more vividly than we have the faintest conception of. It is his emotional, not his rational, side that must be appealed to; and sympathy, kindness, good-fellowship and patience will give us an approach to this that no amount of harsher measures could ever hope to afford.

The War Against Physical Handicaps

Twenty-Five Years with the Orthopedic Surgeon

By Fred H. Albee

NO AFFLICTION of the human race appeals to the sympathy of the average citizen more than that of the cripple, be he child or adult. Whether the disability is due to a Fourth of July explosion, a fall on the ski jump, a crashing airplane, or the missiles of war, the result is equally tragic, and to the uninitiated seems hopeless. For many are still unaware of the rapid strides that orthopedic surgery has taken in the last twenty-five years. The World War revolutionized all branches of medicine, but perhaps nowhere was its effect more striking than in the field of orthopedics.

Orthopedics is that branch of medicine and surgery which deals with the correction and prevention of deformity and with the treatment of chronic diseases of the bones, joints and neuromuscular system. The task of the orthopedic surgeon is to reconstruct the injured portions of the body, and, if it is impossible completely to overcome the physical handicap, to adjust the patient to changed conditions so that he can still be a useful and contented citizen; in other words, to rehabilitate him.

All Society Is Concerned

Rehabilitation, of which orthopedics is a part, today represents three distinct, yet overlapping, problems: (1) the problem of treatment, preventive or corrective; (2) the sociologic problem —the relationship of the injured laborer to the rest of society, and (3) the medicolegal problem of properly applying the Workmen's Compensation Act. The first concerns chiefly the patient, his relatives and immediate friends, but the second and third affect all society.

In this great industrial age, there is an absolute army of unemployed on compensation pay, most of whom are under orthopedic or rehabilitation treatment. The first compensation law, passed by the state of New Jersey in 1911, grew out of the sympathy of society for those crippled or physically handicapped in our great industrial plants.

Society felt that the injured workman was the victim of unfortunate circumstances and perhaps of carelessness or lack of suitable precaution on the part of the owner of the plant; and that, to counteract this, the burden of expense of treatment should be placed on the employer; further, that as far as money can make up for a physical handicap, due recompense should be made for injury in pursuit of industry.

This, briefly, was the logic that led to the passage of the compensation law. Unfortunately, it has not been possible, or at least it has proved most difficult, to keep the effect just that intended by its authors.

The operation of the law has brought about marked changes in social conditions and has indirectly been a factor in the increased cost of living. Before its passage, the injured man made every effort to get suitable treatment, to make the period of treatment as short as possible and to return to work at the earliest possible moment. Often he tried to return to his job too soon, for otherwise his family had nothing to live on.

Now the pendulum is swinging in the other direction. He does not always have the same incentive to get back to work and too often shrugs his shoulders and enjoys the sympathy of his friends and family; for just so long as he is unemployed he receives his stipend, usually about $20 a week, and all expenses of treatment. The burden of this expense, though intended for the employer, is put on the shoulders of society in general, which has to meet it in the increased cost of commodities and in increased taxes.

Family and Friends Too Sympathetic

The injured man may cling to his stipend, or compensation pay, although in every case it is far below his normal wage. His emotional state of fear and anxiety is increased by the attitude of his family and friends. His wife says, "You're ruined for life; don't make a settlement; don't go back to work," when, for the sake of his own health and morale, he should go back. If his case is not controlled wisely from the psychologic standpoint during the period that he is receiving efficient treatment physically, the compensation law will react to his detriment rather than his benefit.

The best sympathy that can be given a crippled man is to see that he is receiving adequate treatment and to encourage him to

return to work as soon as it is safe. Follow-up work is most important; this lies with the surgeon or with the social worker who is cooperating with the surgeon. If the injury was such that normal function could be restored, there will nevertheless be a temporary weakness, and although it is essential that the man return to work, it is equally essential that he be placed with an interested "boss" who will make due allowances for him during the first weeks of return. If the injury is such that only partial restoration of function is possible, a change of vocation may be called for.

The legal aspect is also important. The compensation court has come to take the place of the old court of common pleas in such cases. Closely related to this whole issue of the relationship between the injured worker and his employer is the evaluation of his incapacity to work and the duration of this incapacity. If a leg is injured, but not so seriously that amputation is required, what percentage of the amount awarded for total loss of a leg should be awarded the unfortunate victim? The success or failure of this new department in our sociologic structure lies in the accurate estimation of the merits of the injured laborer.

Making Over the Human Bony System

The outstanding feature of progress in orthopedic surgery in the last quarter century is the introduction of aseptic plastic surgery. The surgeon now operates on a joint with as little temerity as he explores the abdomen. He transplants muscle and bone. He makes new joints. All this is owing to the discovery of aseptic methods by Lister in 1881, which, with many subsequent changes and adaptations, has led to the practical elimination of septic operative wounds. As a result of the benefits of the x-ray in determining diagnosis and confirming the condition of bone, the electrically driven tools and orthopedic appliances introduced within the last twenty-five years, the human bony system can today be made over in a really remarkable way.

The best of the machinist's and the carpenter's automatic machinery has been adapted to the needs of the orthopedic surgeon. The increased understanding of shock (that sudden vital depression which results from intense injury, prolonged pain or loss of blood and which may prove fatal) and the means of combating or eliminating it, together with outstanding advances in technic, have made possible operations that previously a patient could not stand, because of the prolonged shock involved. As a result, conditions that were formerly hopeless are now treatable.

In 1895, William Konrad Roentgen discovered the x-ray, but it took several years to perfect it for its routine use today in determining the exact position of bones in cases of fracture or dislocation, both before and during treatment. It has so increased accuracy in diagnosis and thereby improved results that it is difficult to estimate its importance in the advances of modern rehabilitation surgery. Just when shall a splint or plaster cast be removed? Has union of bone taken place? An x-ray picture is taken, and the surgeon knows instead of surmising.

The Carrel-Dakin treatment of crushing wounds before operation is attempted has greatly lessened the chances of sepsis and has brought happy results. Débridement (removal of all foreign matter and cutting away of crushed tissue) is followed by the insertion into the wound of rubber tubes with large numbers of small holes in them, over which a dressing is applied with the tubes projecting through the dressing, so that the Dakin solution can be injected at intervals of every two hours without disturbing the wound or the patient.

The idea is to keep the wound constantly bathed in a solution containing free chlorine gas with elements which dissolve away the discharges of the wound. It is well known that chlorine is a most potent germicide, and at the same time causes no injury to tissues. An open wound can be so far sterilized by this method that it can be sewed up and will heal immediately without discharging pus.

During the World War a full realization of the physiologic pull of muscles and their displacing influence on bone fragments developed and the Balkan frame—an apparatus for holding the limbs in various positions with as much traction on the extremity as desired—was devised.

A Life-Saving Piece of Apparatus

Long before, this same principle was applied in the introduction of the fracture orthopedic table. This serves to hold either upper or lower extremity in any posture desired, not only during the operation but throughout the application of splints. It makes possible far more accurate work and diminishes the amount of shock to the patient; it is a life-saving piece of apparatus. It further lessens the operating time, since the surgeon can work unhampered, and it allows much more efficient splintage to be applied, usually in the form of plaster of paris.

The bone-mill serves the orthopedic surgeon precisely as the carpenter's mill serves the carpenter in that it comprises electrically driven automatic machine tools for the drilling and cutting of bone. It is of equal importance to the surgeon with the fracture orthopedic table, since it allows much greater accuracy and speed, and thus markedly diminishes operating time and shock.

[Part II of Dr. Albee's article will appear in the April issue.]

Most women must use their hands for more purposes than bridge playing.

The Care of the Hands

By *Herman Goodman*

BEAUTIFUL hands are of great importance to the women of the land in this age. Yet it so happens that most women must use their hands for more purposes than bridge playing and receiving lines.

Household tasks take toll from the hands, and the fingers should not be used if some substitute offers. Today brushes may take the place of hands for many household duties. Soaps, too, are better made, and though their price may be a little higher, the appearance of the hands must be considered. But no matter how ingenious the brush, the hands come in for a share of the punishment meted out by water and soap suds.

The use of rubber gloves is often advocated. Those who use them have oftentimes found no relief, because the hands are bathed in perspiration, and, with no opportunity for it to pass through the gloves, the hands are in constant contact with the fluids as long as the gloves are worn. In consequence the hands may look just as bad or worse than if the gloves had not been used.

To overcome this drawback, I advised the use of a pair of cotton gloves inside the rubber gloves so that the perspiration retained by wearing rubber gloves is absorbed. A change in the cotton undergloves is helpful if the period of use is long, as in spring cleaning.

After the work is done, the hands may be washed in lukewarm water and clean soap. The period of immersion should not be overlong, as the hands have already been exposed long enough. The hands should be perfectly dried. The spaces between the fingers should be given particular attention, as well as the grooves about the nails. The free borders of the nails should be cleansed, but no sharp instrument should be used either there or at the growing edge of the nail where the half moon is.

After washing the hands, the use of glycerin and rose water may be helpful. A little cocoa butter may be gently rubbed between the palms and over the other parts of the hands. Gentle massage of one hand with the other with a motion from the tips of the fingers to the wrist gives a restful sensation.

Physicians do not generally approve the use of patented night gloves. A woman usually prefers her hands unencumbered during sleep.

The appearance of the skin of the hands cannot of necessity be on a higher plane than that of the skin elsewhere, and it must be recognized that the beauty of the skin depends in no small measure on the health of the body. To preserve the general health, or to bring it to standard or beyond is the best guarantee of beauty.

The hands are exposed to many types of infection. Cuts and bruises are common. Splinters are not unknown about the kitchen. In the main, serious results do not follow, but care should be taken thoroughly to cleanse the injured part with mild antiseptics followed by tincture of iodine. If the wounded part does not respond promptly or if the site of injury does not remain closed but reopens at intervals, some part of the foreign body or some deep focus of infec-

tion is present. To treat this requires the service of the physician.

The thin skin of the clefts of the fingers is especially open to infection by certain parasitic fungi. The character of this type of infection has been recognized only recently. The skin of the cleft becomes soggy and red. The upper skin may be eroded. The part itches. Immersion in water is not possible without discomfort. The source of the trouble, the fungus, may be carried to other parts of the skin surface by contact. Contagion from one person to another is capricious. The treatment depends on the findings of the microscope.

The edges of the nail in contact with the flesh are subject to infection and chronic inflammation. Many times the process is stubborn and as long as the housewife must have her hands in water the condition does not improve even with the best medical attention. One or more of the fingers may show the presence of pus due to a superimposed infection on the chronic inflammation, and then the surgeon must be consulted. The nails may share in the ill-looking process and begin to grow deformed in shape or size.

Calluses are not uncommon on the palm of the hand. These thickenings in the protective layers of the skin are responses to irritation.

Cracking or fissuring of the skin is a painful ailment of the skin of the hands. It follows immersion in irritating fluids or contact with other irritants, such as carbon paper, indelible pencils, dyes of cloth, fur and millinery and other industrial risks. It is sometimes difficult to detect the cause of the condition without a thorough examination of the person and the environment.

Excessive perspiration from the palms is a nuisance rather than a disease. The cause of this type of localized excessive perspiration may be nervous or functional. Treatment depends entirely on the cause or is purely empirical.

The taking of certain medicines and the presence of one or two generalized diseases give rise to symptoms on the palms.

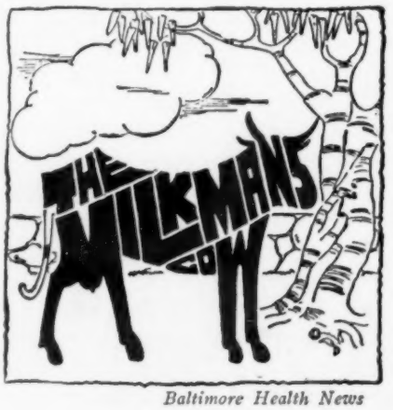
The skin is part and parcel of the general make-up. The skin of the hands not only shares in general affections of the skin but also, because of its exposed position, is subject to many individual afflictions. Prevention is better than cure. One should try to keep the hands healthy.

Keeping Milk Clean after Delivery

THE passing of local ordinances and the appointment of a milk inspector, in response to popular demand, does not release the consumer from further activity in the matter of a clean milk supply, in the opinion of the Denver department of health and charity.

For one thing, if the consumer wishes to be sure that the ordinances are enforced, a visit to the dairy will furnish information as to the condition of cows, barns, milk house, attendants and wagons. Daily sterilization of bottles and equipment and adequate refrigeration may also be subjects of inquiry during this visit.

When the consumer returns home, he should consider the care he gives the milk after it is delivered to him. A safe place for the dairyman to leave it should be provided—a place in which it will be protected from cats, dogs, mice or other animals, from dust and dirt, from freezing in winter and from the sun's rays in summer. Ideally, milk should be taken in, the outside of the bottles washed off and the milk put in the refrigerator as soon as it is delivered.



Baltimore Health News

It is a cardinal sin against the laws of public health to use a milk bottle for anything other than milk. Something more than mere courtesy to the dairy demands that milk bottles be washed and returned promptly. Rinsing with cold water before washing with hot water and soapsuds will prevent the formation of the stubborn white coating that is so difficult to remove from the sides of the bottle when it has stood empty in a warm place or been immersed in hot water first.

Most cities have a milk bottle exchange which washes all dirty bottles and returns them to the dairymen to whom they belong. By this method stray bottles return to their rightful owners, since the dairy's name must be on all caps and bottles. If the day's milk supply does not come in the proper bottle and under the proper cap, it might pay the consumer to find out why, suggests the Denver health department.

Sanitation *in the* Laundry

By Grace Marian Smith

I. First Aid to Soiled Clothes

CLEANLINESS is necessary to health, decency and good moral tone. Clean, fresh, well-ordered wearing apparel and bed, bath and table linens contribute to self-respect. If we will burden ourselves with drapes and similar house furnishings, these, too, should be attractively fresh, else why have them?

In cleanliness and sanitation, laundering plays an important part. Successful laundering of clothes should remove the dirt without removing the color or injuring the fabric, and should not cost too much in money, time or the operator's strength and health.

If clothes are to be washed in the home, a suitable place should be provided, both as a matter of sanitation and for the convenience of the worker, whether she is the housewife or a professional laundress.

Should Not Wash in Kitchen

A kitchen is properly a food shop and should be used for little else. It is distasteful to think of the possibilities attending laundry work in the kitchen in the winter when doors and windows are closed to keep out the cold and when steam from the tubs and boiler, and later from the drying clothes, mingles unchecked with the foods that are being prepared.

Perhaps the kitchen is the warmest room in the house and the family congregates there. The air in most houses and especially in steam-heated apartments is too dry in the winter. On wash day the air in the kitchen, steam filled for hours, is too moist. When the laundering is finished, the air in the room quickly dries to its accustomed aridity. The mucous lining of the air passages has not time to adjust itself to the sudden changes; there is congestion of the membrane and possibly colds or other disorders. If, as may happen, the fire dies down before the rooms dry, the person chills. Under such conditions, laundry day may become an actual menace to the health of the family.

Soiled clothes, even though they contain no disease germs, are objectionable. Early cleansing is desirable. Clothes hung in the closet because we think they are clean enough to wear again never look so well when discovered several weeks later and frequently go to the laundry without further wear. Those that lie long unwashed are likely to become discolored and the fabric may deteriorate.

Even the laundry well or hamper in which soiled clothes are kept acquires unpleasant associations. One suggestion is to place the soiled clothes in a washable bag that fits inside the basket and launder the bag each week with the clothes. Soiled handkerchiefs may be kept in a paper bag and the bag burned each week. Soaking the handkerchiefs in salt water helps to dissolve the mucus. They and other especially soiled pieces should be rinsed out before they are put with the rest of the clothes.

The ordinary family wash carries with it little danger of infection to the worker. Germs are a very real danger when we come in direct contact with them. Most germs are short lived and are readily killed by exposure to heat and sunlight, both of which play leading rôles in laundering. Soap, washing soda, borax and ammonia, common aids to laundry work, are disinfectants.

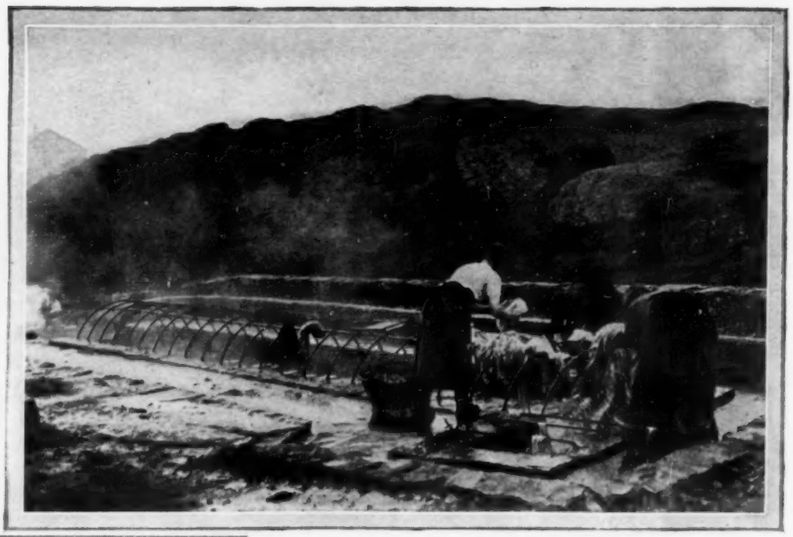
Common Aids to Laundry Work

All soaps and powders should be thoroughly dissolved before they are put into the wash water. Undissolved, they do not cleanse, and if soda is allowed to come in direct contact with the cloth it may leave a brown stain, which deepens under heat and later leaves a hole. Borax is less harmful but the first cost is more. Bichloride of mercury, lysol, carbolic acid and similar high-powered disinfectants are dangerous and should be handled with extreme care and only by those who understand the danger attending their use.

In case of a serious contagious disease, the physician or the health authorities will prescribe methods of caring for articles that have been used about the patient. Things that cannot be disinfected or destroyed should not be used during a contagious illness. By the time clothes

WASH DAY IN FAR-AWAY LANDS

International Newsreel



In Iceland the women do not heat water for washing but use the natural hot springs.

This is only one week's washing which this young woman of Bombay, India, is wringing out.

Japanese women do their laundry work on the banks of the rivers.

Having no back yards, the housewives of Havana, Cuba, must hang their clothes in the courts, which present this gay picture on wash day.

have passed through the accepted procedure of being soaked in cold water, washed in cold or lukewarm soap-suds, then in hot suds (having been rubbed, beaten, whirled or otherwise agitated to force the water through them), rinsed in hot, lukewarm and cold waters, dried in the open air and finished by smoothing under pressure with an iron that may be heated up to 300 F., it would be a hardy germ that still clung to life.

Well-managed commercial laundries now pass the clothes through nine such changes and include a soda bleach in either the hot suds or the hot rinse. In order to neutralize the alkali of the soaps and bleaches, which tend to yellow the clothes, commercial laundries use a "sour," usually vinegar. This is sometimes put in the hot rinse, sometimes with the bluing in the last rinse. The rule is to clean at a low temperature and to clarify at a high.

Clothes that are improperly rinsed do not smell fresh. When we have to carry water in and out, we do not use as much as we should or as we would if we could simply turn a faucet to get it and pull a plug to dispose of it. Sanitary laundering is hardly possible without abundant and convenient water supply.

Since appearance is important, we should be familiar with dyes, stains and bleaches and their action on the various kinds of fabrics. Is the fabric animal or vegetable? Wool and silk, animal fibers, are more easily injured by alkali, so we use a mild soap or ammonia for cleansing and an acid to remove stains. Linen and cotton, vegetable fibers, are more easily injured by acids, so we seldom use an acid on them unless it is a very mild one.

Removing Stains

Stains are best removed before putting the garment into the suds, as soap sets some of them. Experiments indicate that soaking a garment only five minutes in cold water will dissolve sugar and albumin, thus loosening the dirt held in by those agencies and accounting for an estimated three fourths of all stains. Cold soap-suds or ammonia will dissolve grease, which probably holds the remaining soil. The clothes should be rinsed thoroughly to remove the solvent.

Clothes that are underrinsed or overblued develop a gray, grimy look and lack the fresh smell that is part of the joy of clean garments. Clothing to which some soap still clings is irritating to the tender skin of a baby or an invalid. Frequent changes of water and many rinses are necessary to secure the best results.

One of the objections to the commercial laundry has been that clothes from many sources were washed together. The best modern laundries no longer mix the clothes. Each family wash is sorted as we would sort it at home into several groups according to the quality, nature and soil, and each group is washed out individually in a small machine by itself. This practice is more to our taste and insures that each customer receives the laundry she sent, not that belonging to some one else.

Is it safe to let a domestic laundress take the clothes home to launder when all we know about her is that she does laundering? Aside from the distastefully unclean conditions that may prevail and the possibility of vermin, we know that few home laundresses have adequate equipment. They often lack a convenient, sufficient water supply and proper heating facilities for good work. There may be no sanitary place in which to dry the clothes. There is always the possibility of contagious or infectious disease.

Pilgrims Started Monday Wash Day

Why do we have the weekly laundry habit? In some countries, to do laundering only once in several months adds to one's standing in the community. It indicates that the fortunate family owns enough clothes, so that it need not wash its garments as soon as they are soiled! It is currently believed that the Pilgrims originated the Monday date. The precedent grew into a custom that has nothing but custom to recommend it. If we are to have a set day Tuesday would be better, giving us time to collect and repair articles worn over the week-end.

If hot water is obtainable by turning a faucet, there may be no advantage in doing all the laundering at one time. Some housewives prefer to do it in sections, grouping the more delicate articles to wash at one time, hosiery at another session, linens at another, suiting the time to their convenience and not making much fuss about it.

Part of the disfavor in which wash day is held may be due to the tradition that classes it as drudgery. It seems a difficult, disagreeable task, partly because we are not equipped or trained to do the work easily or well and partly because we think of the work, not of the results accomplished. One could cultivate a grudge against a vacation on that score.

Let us get our minds into the right attitude. Laundering renews our favorite garments or articles of household furnishing that were so soiled as to be useless. It is first aid to health, comfort, appearance and sanitation. Looked at in this light, we can welcome the process that restores to us our belongings cleansed from soil, disinfected, renewed in appearance and ready for further service and enjoyment.

[*Part II of this article will appear in the April issue.*]

Sentenced to 30 Days in a

The Inside Story of a Modern "Pest-House"

"SCARLET FEVER! You can't be quarantined here. You will have to stay thirty days in the City Hospital for Contagious Diseases." So said the house physician of a hotel in a large middle-western city, when he looked at my sore throat and my brilliant red rash.

Suddenly I remembered that he had used the polite name for what used to be called a pest-house, a word that had always sent shivers of fear and horror up my spine. I thought of such a place as an old building that had seen better days in other uses; a place in which only very poor and friendless victims of contagious diseases were cared for by queer immune people who knew nothing of nursing but who did the best they could until the unfortunate patients either got well or died.

Yet the subject had a fascination for me, just as poison is said to have for many persons. For this reason, I was not as downcast as might be expected. I was to see the inside of one of these houses of mystery.

Soon I was in the light, airy admitting room of the hospital and a blue-uniformed nurse said, "Take off your clothes and get on the cart under the sheet."

"Take all your clothes off," replied that calm young woman, without looking up from her task of listing the contents of my traveling bag.

I was given a gown that tied in the back. All personal belongings were stored in a locker. Only my hairpins were left me.

After temperature and pulse were taken, the intern who was to be my doctor appeared. He was tall, blond and young. In his white suit, covered by a white muslin hospital gown, he looked angelic. By the time he had taken my medical history and that of my family, the chief of staff and his assistant, both in white gowns, arrived. After they looked at various spots in my mouth and throat, I was wheeled to a little room with gray walls and white-painted iron furniture. Here I was to spend the next month.

If I were only back at the hotel, I thought.

The bareness of my room reminded me of the soft carpets, the mirrors, the mahogany furniture and silk draperies I had left. The refined

YE OLDE PEST HOUSE
IN THE FEARSOME DAYS OF SUPPOSED AIR INFECTION
Better Than A Germ Proof Fence
Is Cleanliness and Common Sense

Ye old pest-house, as represented in a parade at the fiftieth anniversary of the incorporation of the city of Winnipeg, Canada.

Being unused to institutional life and of a modest upbringing, I had no intention of removing all of my clothing, so when I had partly undressed, I inquired meekly, "Shall I leave my stockings on?"

quiet, the happy throngs with which I had been mingling (and incidentally exposing to scarlet fever) were recalled by contrast with slamming doors, clattering dishes and the shouting, crying, laughing children. It was worse than a jail;

Contagious Disease Hospital

as Told by the Patient

Mildred G. Durbin

prisoners have visitors and I could not. Could I keep my reason for thirty days?

That evening I was vaccinated against smallpox. Without waiting to hear whether I would object, the doctor said, "Every one who comes here must be vaccinated," and added this cheering information, "We have everything here. A smallpox patient may be admitted any time."

How I wished I could take my germs and go off by myself.

"How many days must scarlet fever patients remain in bed?" I asked the nurse.

"Twenty-one," she replied reluctantly.

Certainly I had not bargained for this. I thought I would be bedfast three or four days, then perhaps I could stroll about the grounds with other patients until the quarantine period was ended. But three weeks would never end. Head and back ached. Throat burned. Black despair settled over me. I pulled the sheet over my face and finally cried myself to sleep.

But I was reckoning without the natural kindness of human nature. The next morning a large, motherly looking woman greeted me with a very foreign, "How you feel this morning?"

Here was an opportunity for diversion, so while Julia, the maid, busied herself about my room, I said, "What country are you from?"

"Passaic, New Jersey," she replied. "Ever hear of that country?"

She responded to human kindness even more quickly than had I, and in later conversations told me in her meager English that she was a widow with seven children, that she was originally from Croatia, now Jugo-Slavia, and spoke seven languages.

"They speak different languages there," she said naively, "just as they do in Passaic."

She added proudly that she taught German in a night school.

Then there was Bernard, the Irish boy who mopped the floors. He had been in this country three years and said that immigration should be stopped for the next five years. Work was too scarce. Many a day he leaned on his mop and told me of the beauties and pleasures of old Ireland.

I soon learned that there were twenty children in two wards. Most of them were from orphanages; the others, for various reasons, could not be cared for at home. Often Bernard brought toys to the friendless ones, and I always knew by the shouts and laughter when he was mopping the floors in the wards.

Their favorite pastime was singing, and the favorite selection was "The Prisoner's Song."

YOUR OWN MUNICIPAL HOSPITALS OF TO-DAY
WITH THE CERTAIN KNOWLEDGE OF CONTACT INFECTION
Winnipeg—The City With The Aseptic Conscience

The modern contagious disease hospitals as shown in the Winnipeg parade. The photos are reproduced by courtesy of the Modern Hospital.

I am sure they did not realize its appropriateness. That mournful melody was more catching than the measles. The older patients took it up, doctors and nurses hummed it as they went about their tasks.

Sometimes the children gave the prisoner a rest. Then they shouted, "Don't Bring Lulu" or "She's My Baby." One boy pretended he was a trap-drummer and kept time by beating with some plaything alternately on his bed and the iron stand beside it.

I soon learned many of their names and recognized their voices; their antics and conversations became my principal diversion.

One day I heard this conversation between a little girl in one ward and a little boy in the other ward:

"What's your name?"

"Billy. What's yours?"

"Eleanor Margaret Dunham. What's your father's name?"

"What?"

"What's your *fath*-er's name?" she shouted.

"I can't understand you." (Billy was a foundling.)

"Are you black or white?"

And there the conversation languished.

But tragedies as well as comedies were enacted in the wards. The most pathetic patient was 5 year old Bobbie, who developed a bad case of homesickness on his second day at the hospital. He always woke crying, and between sobs wailed again and again, "I want to go home. Take me out of here."

One day he sobbed, "Daddy will come home and say, 'Where's that boy?'"

The tactful nurse was at her wit's end, but answered, "They'll say, 'He's at the hospital getting well.'" That seemed to satisfy Bobbie.

All Diseases Treated in Same Building

My angelic-looking doctor called once or twice a day and always with an attractive grin on his face.

"Do you treat diseases other than scarlet fever?" I asked him one day.

"Oh, yes," said he, "measles, diphtheria, erysipelas, meningitis, and so on."

"You have a good chance to contract them," I persisted.

"Yes," he replied, "but we are careful. We wash our hands often to protect ourselves as well as the patients."

"Have you had all these diseases?" I asked the efficient young head nurse.

"None of them," said she, "and I have had none of the serums. I am just careful. You may have noticed that a nurse, before she does anything for you, always puts on the muslin hospital gown that hangs behind your door. It is the same in all the rooms. We are taught to wash our hands often, and we never put our fingers in our mouths or on our faces or hair while we are on duty." Always the hands were the offenders.

"And why are the nurses' uniforms not alike?" I inquired.

"These nurses," said she, "have nearly finished their training in the different training schools of the city, and are here for their work in contagion."

How different these efficient young women from the queer people I had expected to see!

With their elaborate system of intelligent care in handling the patients and in sterilization of used articles, the nurses and doctors believed that they could prevent carrying disease germs from one patient to another. One case bore out this belief. A scarlet fever patient developed diphtheria, and her treatment was continued in a room on the scarlet fever floor. None of the rest of us took diphtheria, although our doctors, nurses and maid also took care of the diphtheria patient.

Soon I was vegetating along with the routine. One day was almost like another. The young man across the hall forgot when he came, just as people do in solitary confinement.

The most important thing that could happen was the weekly tour of the medical staff. The nine doctors, headed by the chief, all clad in white muslin gowns, looked like so many Ku Kluxers without their hoods. The patients looked their best, the nurses walked softly, and even the children, who usually greeted one member of the staff with shouts of "Doctor! Doctor!" were awed into silence.

My Daily Fare

For years I had heard much of graft in politics, and since this was a municipal hospital, I was expecting to have only the most meager fare, perhaps dry bread, black coffee and rice. Imagine my surprise at being served the best of everything, meat, fish and fowl as well as fruits, whether fresh, dried or canned.

In the middle of the afternoon, a nurse brought fruit juice and wafers, and on Easter morning a purple egg greeted me from the tray. When I received these special attentions, I always thought, "The city of C——— is handing this to me."

At last the thirtieth day arrived. A month before, I was sure it never would.

I hope I can always remember how happy I was when I had taken a soap-suds bath, picked up my traveling bag filled with sterilized clothes and started for the finance office. Money had not been mentioned. Whether I had any money or not, I was there for thirty days for the protection of others as well as myself.

As the taxi sped away, my heart was full of love for the big, kind city that takes good care of her own and of the stranger within her gates.

The Conquest of Disease

By Thurman B. Rice

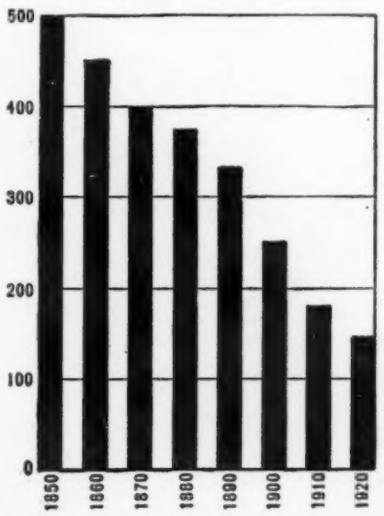
EVERY normal person wants to live long and well, and to avoid pain, discomfort and death as long as possible. Disease can defeat this most natural ambition. Disease is the outstanding physical enemy of the race of man. The conquest, the eradication of disease is paramount among the constructive problems that society has set for itself.

The prevention and cure of disease is the proper purpose of every citizen and of every government, be it local, state, federal or international. The assistance of every person from the humblest to the highest is needed in the great work of making the human race healthy, happy and efficient. But to one great group of trained men is set aside the custody of the public health. From a physical standpoint, at least, the medical profession has the most important job in the world.

Cheating Death

How well has the profession met the obligations of its stewardship? Is disease being pushed back? Is death being cheated of its prey? What of the future of the race in relation to disease? An analysis of the situation, an inventory of health stock, a review of the cohorts that medical science and society have arrayed against the hosts of darkness and disease should awaken the concern of every person who is interested in progress.

For the purposes of the present discussion there are two great groups of disease: the transmissible and the non-transmissible.

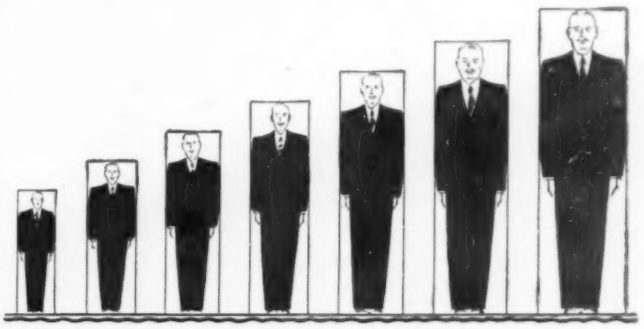


Record of the conquest of tuberculosis in Massachusetts.

The problems presented by each are widely different.

The transmissible, or "catching," maladies are definitely on the run. In civilized communities such dire plagues as the black death, Asiatic cholera, typhus, leprosy, smallpox, yellow fever and similar terrifying specters of the past are now almost unknown. We, in the security of the twentieth century, find it impossible to picture the horror of the days of uncontrolled epidemics when men and women died like flies in the first frosts of autumn, and their rotting bodies were left unburied in the streets because none could be found who would give them decent burial.

These diseases are still rampant in the countries in which ignorance, dirt and disorder reign, but in our country—No! We have set the resources of science to the great task of driving out disease, and it is succeeding amazingly.



The average length of life is rapidly increasing.

The death rate for typhoid fever is about one fifth of the rate for the year 1900, and the tuberculosis death rates of the present bear about the same relation to the rates of 1850. The mortality rates of diphtheria, dysentery, malaria and many other diseases have fallen precipitously. The average length of life is rapidly increasing, and altogether the twentieth century has seen more progress in disease control than all of the remainder of recorded history.

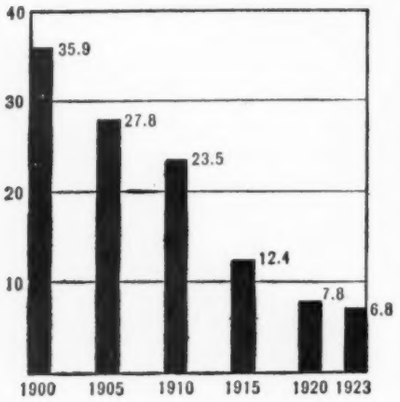
Where Credit Belongs

Three divisions of medical science deserve credit for the decline in transmissible disease: (1) epidemiology, the science of the manner of transmission and of the control of particular diseases; (2) immunology, which seeks to find a way of making us individually insusceptible to the attack of a specific disease, and (3) sanitation, which seeks to make living conditions such that no disease will find in them the opportunity for an attack on the race of man.

By the application of the principles of epidemiology it is now possible to trace to its source almost every epidemic. When all of the facts are known there is nothing intangible about an epidemic of typhoid, for instance. Germs do not arise spontaneously; they pass

from the sick person (or a carrier) to the well. How do they pass? Germs cannot walk or run or fly; they must be carried. What are their vehicles?

Excrement, discharges from the mouth and nose, contacts and the bites of certain insects are the vehicles, and it is the function of epidemiology to trace these routes of infection and to stop this traffic in germs.



Typhoid is in retreat in the registration area of the United States.

Five great campaigns against disease are being waged in this country: (1) antityphoid and (2) antihookworm against excrement-borne diseases, (3) antituberculosis against sputum-borne diseases, (4) antivenereal against contact infections, and (5) antimalarial against the insect-borne diseases. These are by no means all the ailments to be routed, but there is such overlapping that the accomplishment of aims of the campaigns indicated would nearly solve the whole problem of the prevention of the transmissible diseases.

Thanks to Sanitation

Sanitation has made an immense difference in our world. It is to be thanked for the clean water and milk that we drink, for clean food, clean, well ventilated and well cared for homes, and for the decent attempt to dispose of the sewage, garbage and trash that man tends to accumulate about his place of abode. It drains swamps, condemns ancient and dirty homes and schoolhouses, sweeps—even washes—the streets, disposes of nuisances and does a hundred and one disgusting tasks that make the world a sweeter, more beautiful and more healthful place in which to live.

Immunologists are constantly finding new antitoxins and vaccines that will enable those using them to laugh at the possibility of harm. They are setting the bacteria against themselves. Vaccines for smallpox and typhoid, antitoxins for diphtheria and tetanus have been remarkably successful, and are well known. Hydrophobia, anthrax, whooping cough, yellow fever and many other diseases are also controlled by one or another application of the principles of this great science. Recently scarlet fever and measles have been brought into the fold.

Indeed without the least boasting it can be asserted that all the important transmissible diseases can now be controlled in a country like our own, with the partial exception of influenza, pneumonia, infantile paralysis and epidemic cerebrospinal meningitis. Perhaps we should name only the first two in this connection, and possibly even they may soon fall before the researches of many able "death fighters and microbe hunters." We know their cause, to be sure, and the manner of their transmission, but have not been able to conquer them. The venereal diseases are still at large, but not because of the inadequacy of medical knowledge. Their prevalence can be charged rather to lack of economic, sociologic and moral adjustment to the needs of the day.

So the medical profession can thrill with pride of accomplishment and can say of almost every transmissible disease, "We have met the enemy and they are ours."

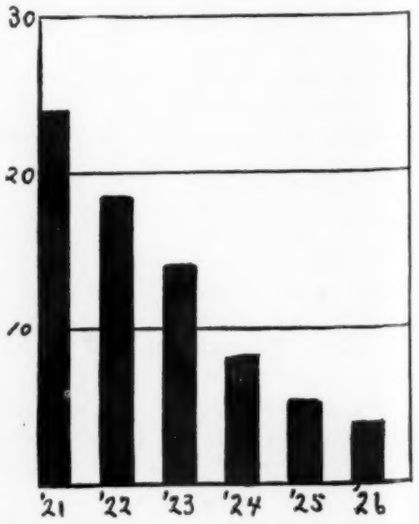
Of those diseases that are not transmissible less can be said, but the record is still a proud one.

The recent advance in the understanding of the elements of nutrition is noteworthy. By the application of this knowledge the maladies known as scurvy, rickets, beriberi and pellagra have been put to flight. With the increased understanding of the glands of internal secretion it has been made possible to attack diseases that until rather recent times were surrounded with mystery; the conquest of diabetes is a shining example.

Wonders of Modern Surgery

The amazing wonders of modern surgery read more like the miracles of supermen than mere human accomplishments. The glorious success of scientific obstetrics in making the travail of motherhood safer and easier stirs us to the depths.

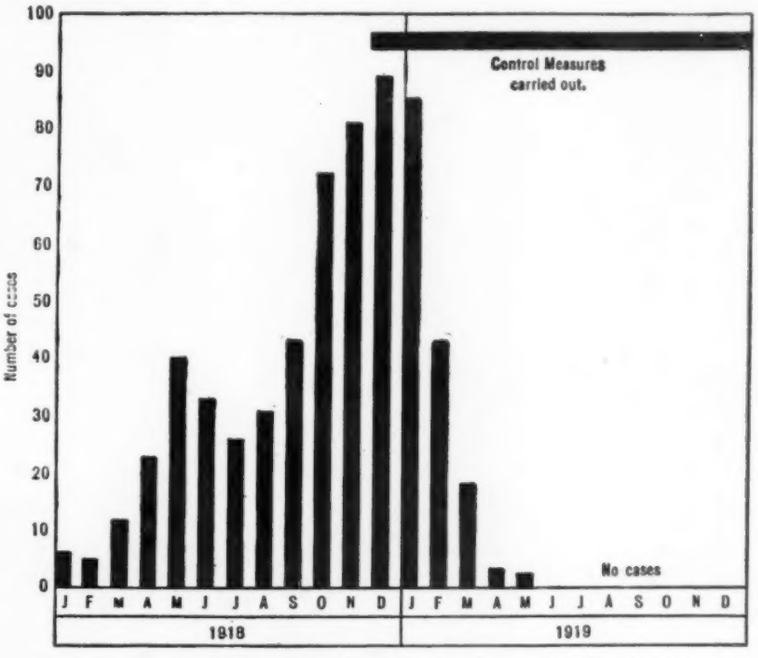
The concoctions of "yarbs" that our forefathers used for medicine have been subjected to the closest scrutiny. Those that are worthless are rapidly being rejected and the more useful ones purified and put up in more acceptable forms. Organic chemistry has presented us with a great profusion of strange new compounds some of which promise to be of extraordinary value. Physics has



Diphtheria on run in Indiana.

presented us with all sorts of rays—x-rays, ultraviolet, alpine, radium—and with electricity in a dozen useful forms. Botanists have sought the world over for new drug-bearing plants and have tried to improve the virtues of the old ones by scientific breeding. Zoologists are studying the laws of inheritance and testing out every sort of animal organ extract to find those that can be applied to the problem of human disease.

Ah, the blessedness of ether and chloroform, of nitrous oxide and ethyl chloride, of morphine and cocaine! They give us faith that there is a kindly God in heaven. Quinine for malaria, epinephrine for the choking asthmatic, digitalis, arsphenamine, atropine, iodides, desiccated thyroid, et al.! How adroitly they confound the hosts of the enemy and push them back!



Record of effective effort in one of the hotbeds of yellow fever infection, Guayaquil, Ecuador, S. A.

Tests without number point out the culprit disease in the great detective agency that is modern diagnosis—chemical tests, physical and electrical apparatus of great ingeniousness, x-rays, photography, bacteriologic procedures, exhaustive physical examination by highly trained specialists. Every science brings its offering to the altar of applied medicine to the end that the race of man may live in health, comfort and efficiency. Even death triumphant is forced to reveal its strategy at the postmortem table and in the dissection room.

How like an organist the modern medicine man plays upon the astoundingly intricate organ that is the human body, pulling this stop and pressing that key, utilizing for good the infinite forces of nature which he has mastered by submitting to their every and slightest whim! How like a god!

But not every human ailment is on the wane. Cancer and diseases of the heart, the kidneys, the blood vessels and the brain are increasing rapidly. They are for the most part diseases of middle or advanced life. Folk must die of something to be sure, and as so many of them are reaching the afternoon of the life span, many more of them must of necessity die of the diseases of later life. When during the middle ages the average length of life was about nineteen years, cancer and arteriosclerosis rarely got a chance at a fellow, but now that the average length is from 56 to 58 years most of us are candidates for those conditions.

Still we would hold them off as long as possible. Cancer should not cause the death of more than a fourth or a third of all those who have it. Early diagnosis and prompt surgical treatment will usually beat the undertaker when the patient is alert and well informed on these vital subjects.

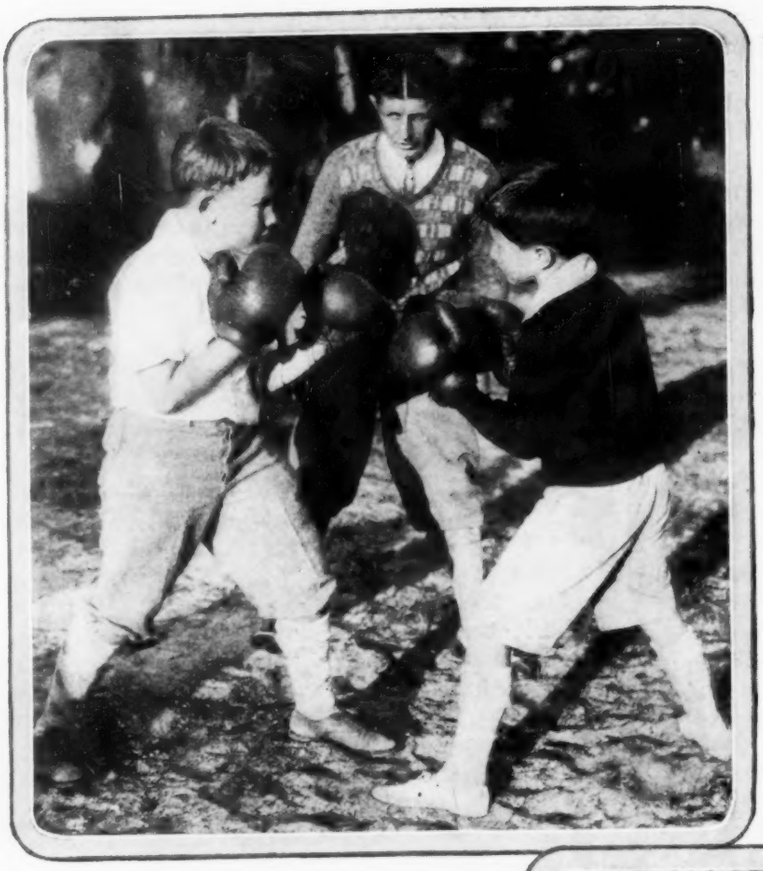
The removal of several carloads of bad tonsils and teeth will surely save millions of hearts, kidneys and sets of blood vessels from injury and premature degeneration. The proper understanding of the body and its needs, which is rapidly filtering through the population by means of education in hygiene, must surely save an immense amount of trouble in the future, or else the world is topsy-turvy, which it certainly is not.

There is method and system in the campaign against disease. It is successful because it is scientific and because it is rational. Man has at last started to lift the determination of his own destiny from the lap of the gods and presumes to use his own wits to save his skin.

Militant Attitude Toward Disease

Time was when a parent was expected to fold his hands in submission when dysentery took his child, but now he clenches his fist, sets his jaw and fights to save his babe. We are unorthodox enough to believe that in so doing he is worshiping God in a more acceptable way. Time was when it was a religious duty to fold one's hands and die in sweet resignation, but these days good folk prefer to live in order that they can give dirt and disease and the devil another sock in the eye.

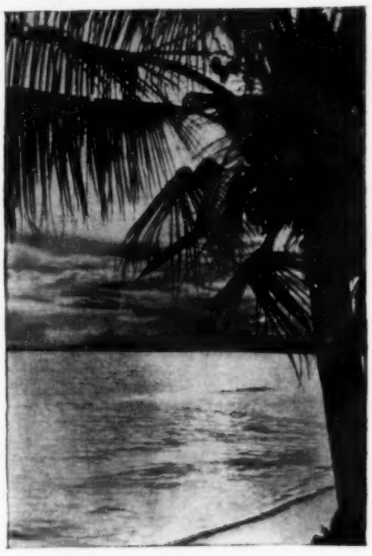
Because of this militant attitude toward matters pertaining to things of vital importance we presume to predict that the further conquest of disease lies in the immediate and continuously into the distant future.

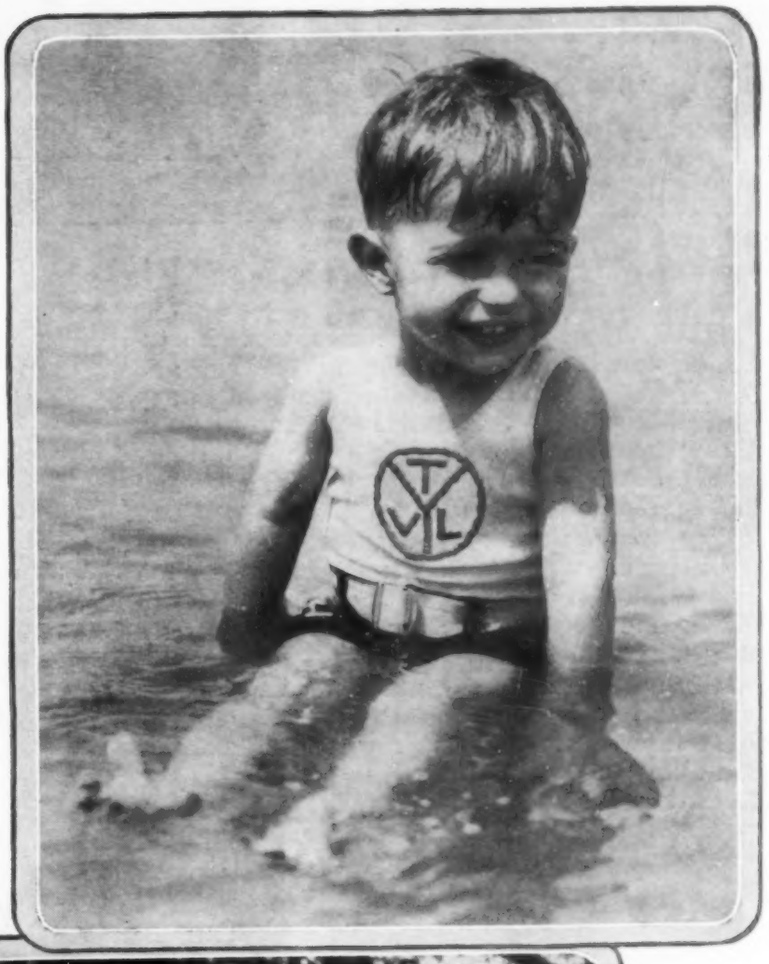


Southern Playgrounds

Where None Are Tempted to Lead Indoor Lives

Photos by Pacific and Atlantic





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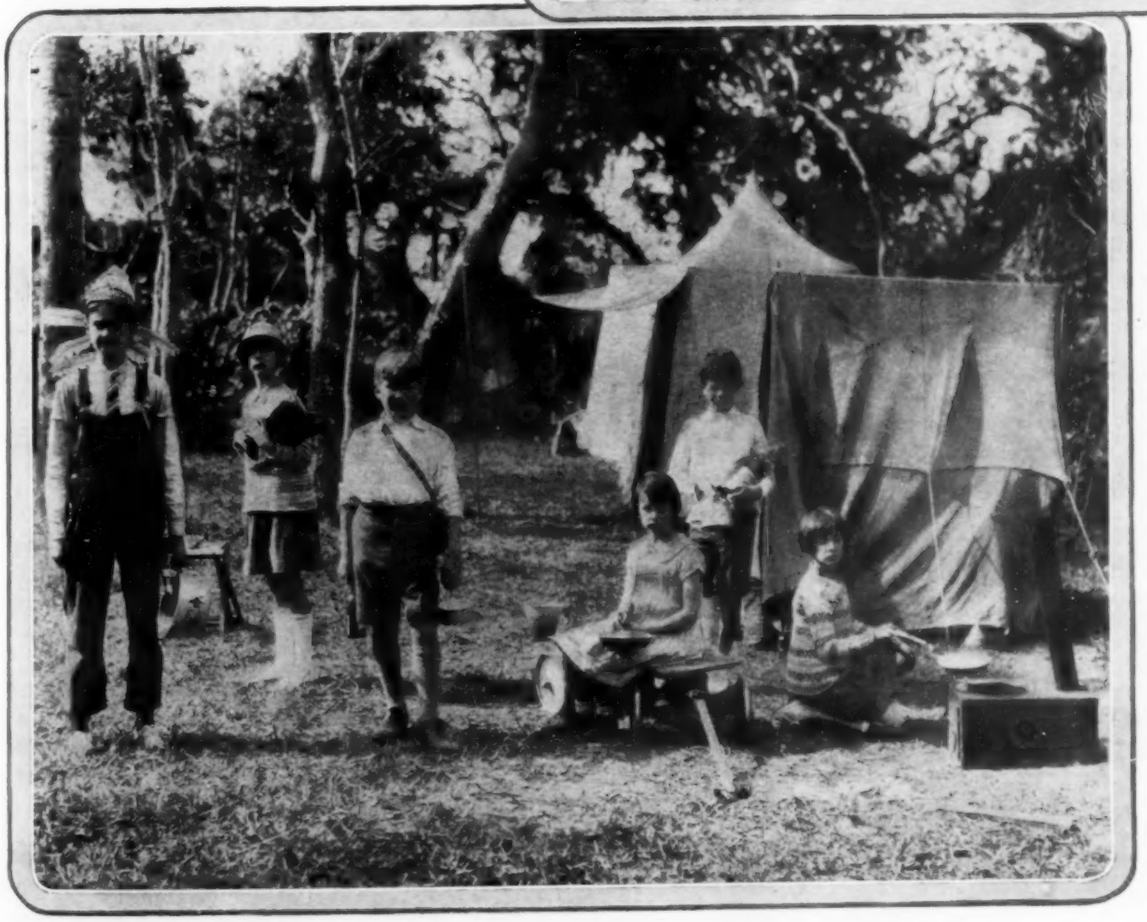


Pacific and Atlantic

Kustards for the King

By Elsie Fjelstad Radder

AND the queen will like them, too! Fortunate is the mother whose little kings and queens like plain cup custard. Many children do and it helps so much in giving them the quart of milk a day. But many other children thrive better on variety, and these recipes are intended for them.

Any one can make good custard. It should not be baked with too hot an oven or for too long a time. Soft custards should be made in the double boiler and should be cooked only until they coat the spoon.

It is satisfactory to steam a custard, especially if one is making a small amount. To do this, place the custard mold in a pan of cold water and allow the water to come to a boil. Let the custard stand in the water until the water has cooled, or keep the water just below the boiling point until the custard is firm.

Baked Custard

1 cup milk
1 egg
Pinch of salt
1½ tbsp. sugar

Beat egg slightly, add salt, sugar and scalded milk. Flavor to taste with nutmeg, cinnamon, lemon or vanilla extract. Pour into individual cups. Set in deep pan and pour in boiling water nearly to top of cups. Test with a silver knife. Serves two.

Baked Raisin Custard

2 eggs
⅔ cup raisins
2 cups milk
Pinch of salt
½ tsp. nutmeg

Beat eggs slightly and add chopped raisins, milk, salt and nutmeg. Bake in individual cups. Serves six.

Soft Custard

½ cup milk
1 egg yolk
1 tablespoon sugar
Speck of salt
Flavor to taste

Beat egg slightly and add salt, sugar and scalded milk. Flavor. Cook in double boiler until mixture coats the spoon. Serves one. This is nice served on fruit.

Coconut Custard

1 quart milk
¾ cup coconut
1 tbsp. cornstarch
2 tbsp. water
2 eggs
⅓ cup sugar
Pinch of salt
1 tsp. vanilla

Add coconut to milk and scald in double boiler. Mix the cornstarch smooth with the water and add to the milk. Cook five minutes. Add the slightly beaten eggs, sugar and salt. Mix well and add flavoring. Bake in individual cups set in a pan of hot water. Serves six.

Chocolate Custard

3 cups milk
½ cup cocoa
4 egg yolks
½ cup sugar
¼ tsp. salt
½ tsp. vanilla

Add a little cold milk to the cocoa, sugar and salt and mix to a smooth paste. Add to the rest of the milk, scalded. Beat yolks slightly. Pour the milk mixture onto the eggs slowly. Add flavoring. Put into custard cups and place in a pan of water. Bake according to directions.

Beat the egg whites stiff. Add three tablespoons of powdered sugar, a few drops vanilla, and spread over top of custards. Bake slowly ten minutes longer. Such a meringue improves any custard, in the children's opinion. Serves four.

Orange Rice Custard

3 cups milk
2 eggs
¼ tsp. salt
½ cup sugar
½ cup boiled rice
1 tbsp. orange juice
Candied orange peel

Scald a few pieces of orange peel with the milk and rice. To the beaten egg yolks, add the sugar and salt. Remove the orange rind and add the sugar mixture to the milk. Stir over hot water until thickened. Remove and chill. Just before serving, beat the egg whites, add a few grains salt, a tablespoon of powdered sugar and the orange juice. Pile on the custard and decorate with chopped candied orange peel, if desired. Serves four.

Caramel Custard

¾ cup sugar
1 quart milk
5 eggs
½ tsp. salt
1 tsp. vanilla

Melt sugar in a skillet, stirring constantly until it is golden brown. Have milk scalding and add to the sugar slowly, as soon as sugar is melted. Add slightly beaten eggs, salt and vanilla. This custard will be firm if baked in one large mold, or it can be done in individual molds. Serves eight.

Coffee Custard

3 tbsp. coffee grounds
2 cups very hot milk
Pinch of salt
3 eggs
4 tbsp. sugar
¼ tsp. vanilla

Pour the hot milk on the coffee grounds and allow it to stand for five minutes. Strain. Beat eggs slightly, add sugar, salt and vanilla. Mix and strain into individual cups. Bake. Serves four. This custard has only the coffee flavor and is not harmful.

Floating Island

1 quart milk
3 eggs
½ cup sugar
½ tsp. salt
½ tsp. flavoring
1 tbsp. cornstarch

Heat the milk. Separate eggs. Mix salt, sugar and cornstarch together and add to yolks. Add 2 teaspoons of sugar to egg whites and poach on top of hot milk for two or three minutes or until firm. Add milk to egg-sugar mixture and cook in double boiler until thickened. Add flavoring when nearly cool. Place in glass pudding dish and put cooked whites in dabs on top. Decorate with jelly specks, a maraschino cherry or candied fruit.

This custard may be poured over sliced orange or banana, or ¾ cup of crushed fruit (sweetened to taste) may be added to the meringue and then it need not be cooked. This can be made up attractively and invariably pleases the children. Serves six.

The Mental Patient and the Laboratory

By L. D. Hubbard

THERE exists among those who are uninformed a sort of legend or myth to the effect that patients in hospitals for mental diseases are the victims of all sorts of experimentation. It is said that they suffer tortures ranging from experimental feeding with animal glands to practices not far removed from vivisection. The theory is elaborated until some believe that these unfortunate people finally are foully done to death in order that their bodies may be cut up to satisfy the gruesome desires of curious onlookers.

The well-equipped mental hospital has laboratories of all sorts, to be sure, but these departments are devoted exclusively to activities beneficial to the patients, either directly or indirectly. It is essential that the patient on entering the hospital shall undergo certain tests in order that the greatest possible amount of information may be obtained concerning the condition of his entire system. Without this knowledge, his treatment would be incomplete and symptomatic.

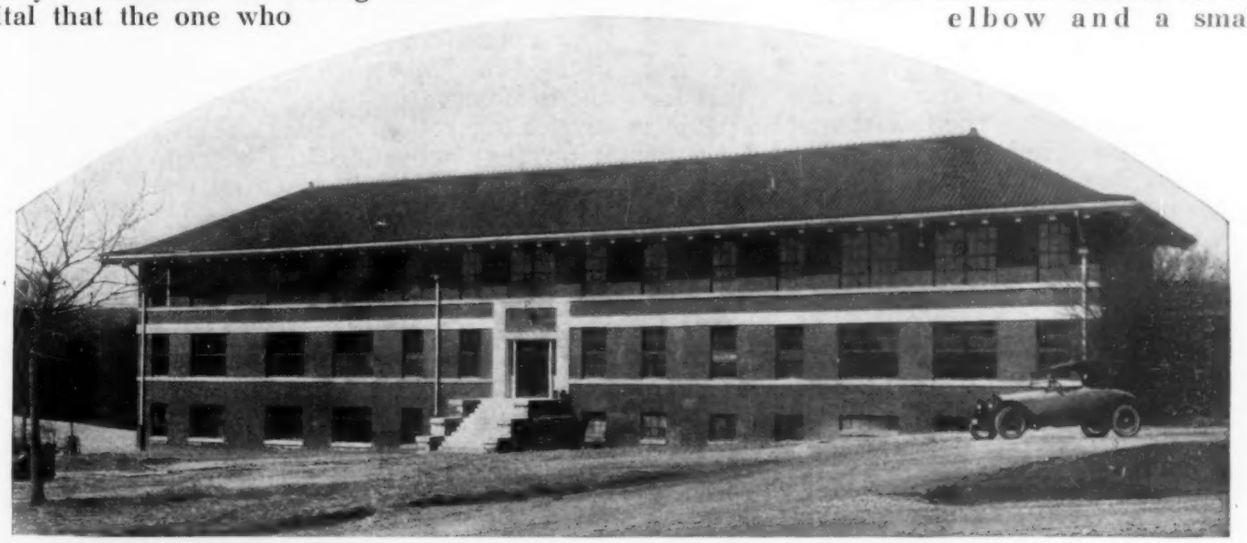
First Test Is of Urine

Within the first few days after his arrival a urine specimen is sent to the laboratory. Some patients resent this and refuse to cooperate. A certain class of people believe that parts of the body, such as hair and nail parings, or excretions from the body, such as urine and feces, carry with them something so vital that the one who comes into possession of them can, by mysterious methods, do harm to the person from whom they came. Common sense at once shows the absurdity of this superstition. The examination of the urine may show the existence of some serious disorder of which the patient is wholly unaware. The same statement applies to the examination of the stools. No harm is done the patient by these laboratory procedures, and much light may be thrown on the patient's disorder.

Blood Examinations

Another test that is done almost as soon as the patient is admitted to the hospital is the examination of the blood. To obtain the blood, the ball of the finger or the lobe of the ear is sterilized and a tiny prick is made with a sterilized instrument. The pain amounts to nothing and important data are available when the cell counts and hemoglobin percentage have been recorded. Low grade infections, which give no signs other than an increased number of white cells in the blood, may thus be discovered and treated. Anemias of importance in themselves or pointing to otherwise undiscoverable causes are brought to light so that treatment may be instituted early in the course of the disease.

The removal of blood for the Wassermann test is not painless but is not by any means a serious matter. A small needle is inserted in a vein at the inner surface of the elbow and a small



The laboratory of St. Elizabeth's Hospital, a government institution at Washington, D. C.

quantity of blood is removed. The patient is uncomfortable for a few moments and may have a little stiffness and soreness in the arm for a day or two, but no more serious results are possible. The examination shows the presence or absence of a syphilitic infection. It is to this test that we are indebted for the ability to treat syphilis in its early stages before other signs and symptoms have become definite.

Such tests, when done routinely on all patients admitted to the mental hospital, provide data that clarify the theories of the cause of mental illness. Many people believe that the majority of mental disorders are due to so-called blood disease, meaning syphilis. That this is not true is shown by the results of routine Wassermann tests. The families of mentally ill patients and sometimes the patients themselves are so distressed by this popular but erroneous belief that their minds are greatly relieved by the negative results of the blood examination.

The spinal puncture is truly an unpleasant proceeding, but it is not dangerous, and, in the hands of a skilled operator, is not painful. The study of the spinal fluid is essential in the diagnosis of obscure diseases of the brain. It not only confirms diagnoses suggested by physical signs and symptoms but often discloses the presence of a wholly unsuspected disease condition. In some hospitals such a puncture is a part of the routine procedure on admission but in other hospitals it is done only when there are specific indications. Although a severe headache and sometimes nausea may follow the operation and may even persist for several days, there are no serious results and the patient is amply repaid for the temporary discomfort by the importance of the information gained.

No Patient Endangered by Experiments

It is inevitable that a certain amount of experimental treatment should be carried out in any hospital, else there would never be any new or improved therapy. Patients receiving treatment that is new or is applied according to new theories are watched with the greatest care, and the slightest untoward symptom is a signal for the discontinuance of the treatment. No patient is ever endangered by experimental therapy, and many have had the good fortune to prove, by the benefit they receive, the value of a new drug or a new procedure.

The idea that outrageous crimes are perpetrated in hospitals for mental patients because they are unable to betray their tormentors is ridiculous, since the object of the physicians is to restore the patient's mental health and return him to the community. Should the physician harbor any desire to mistreat the patient, he would not dare to do so. Furthermore the majority of mental patients are quite capable of telling what is done to them even while they are ill, and although they often exaggerate and misinterpret things, they seem never to err on the other side.

The idea that physicians hasten the death of mental patients in order to perform postmortem examinations seems too absurd to deny, and yet there are people who profess to believe it. The physician's aim is always to prolong life by every means within his power, often against the protests of the patient and sometimes, when the patient's sufferings seem unendurable, against the protests of his family. The physician is bound to do this and, even should his compassion tempt him to do otherwise, the certainty of detection would be sufficient to deter him, for the fate of a hospital patient under modern conditions does not lie in the hands of one physician alone.

Postmortem Examinations Helpful

It is probable that no hospital exists in which postmortem examinations are performed without the consent of the relatives, provided, of course, that there are any relatives. Among well-educated and reasonable people such permission is readily given because they realize that the complete understanding of a disease is impossible without a study of the diseased tissues and that such study is possible only after death.

Each person who grants permission for a postmortem examination of the body of a patient in a mental hospital contributes his bit to help others suffering from the same disorder. Families sometimes request these examinations in the hope of learning whether actual organic disease existed, so that they may know whether special precautions must be taken in the care of the patient's children.

Much of the prejudice against autopsies arises from misinformation and erroneous impressions. The procedure is done carefully and neatly. The face is not disfigured, nor is the body hacked and mangled as the alarmists suspect. A postmortem examination is not pleasant to observe or to contemplate; neither is a surgical operation, but one does not shrink from it on that account when something is to be gained by allowing it.

The hospital for mental diseases devotes itself to the care and treatment of mental patients, but that is not its only function. It must also study the patients in its care with a view to increasing the general fund of knowledge of mental diseases, their causes, their nature and their treatment. The laboratory plays an important rôle in both these fundamental aims and should be regarded as a source of benefit not only to present patients but to patients of the future.

HYGEIA
THE HEALTH MAGAZINE
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Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Dangerous Cosmetics

A special committee of the section on diseases of the skin of the American Medical Association has just issued a preliminary report of an investigation of eruptions following the use of cosmetics. Apparently such eruptions are far more frequent than is ordinarily thought to be the case. Practically all the various types of cosmetics were incriminated in this report. There were four definite records of injuries from face bleaches, nine from cold creams, and six from miscellaneous preparations.

In most of these instances the dangerous substance included was some form of mercury, usually various strengths of ammoniated mercury. There were forty-three cases of injuries received from hair tonics distributed rather generally among all the imposing bottles seen on the barber's and the beauty parlor's shelves. "Lucky Tiger" and "Mahdeen" were most often concerned. In hair tonics and hair dyes the substances usually responsible for irritations of the skin are ammoniacal solutions of silver nitrate, arsenic, paraphenylendiamine and sometimes resorcin. Many foreign countries now have laws expressly forbidding the use of paraphenylendiamine in such preparations.

In addition to the usual cosmetics, such concoctions as depilatories, mouth washes, orris root and toilet waters have occasionally been responsible for severe eruptions. Sometimes the drugs are used in strengths so great that they are bound to be irritant. In other instances the person concerned has been the victim of special sensitivity to some ingredient in the toilet preparation.

At the next annual meeting of the American Medical Association to be held in Washington, D. C., in May, the section on diseases of the skin is to have a special exhibit on skin disease quackery. Here will be shown not only all the various cosmetic preparations that come in this field but also some of the disastrous results that follow skin peeling, face lifting, paraffin injections and other well known tricks of the beauty quack's trade.

Operative Rejuvenation

The promoters of the conception that the aged and senescent can be restored to pristine youth and vigor if not to Adonis-like beauty by surgical performances related to their sex glands have been utilizing the press, the motion picture and such periodicals as were willing to accept publicity material in lieu of scientific contributions for the advancement of their trade. As a result public interest in this topic, never at a low ebb, has risen almost to fever heat.

In the midst of this hyperenthusiasm the results reported by Lieut. J. P. Arland of the Royal Air Force Combined Hospital in Busrah, India, arrive like a cold breeze out of Medicine Hat. He begins his report with the statement that the surgical methods have yielded discouraging results. In only one out of fifteen cases was there anything even remotely resembling benefit to the patient, especially so far as concerned an increase in sexual vigor. The British surgeon concludes that the Steinach method is of doubtful value and that the Voronoff method leads to inflammatory changes without producing any change to the good.

No doubt the inspired surgeons who continue to profit by the hopes and ambitions of foolish old men will continue to urge the merits of these unestablished operative procedures. But they have still to present scientific evidence that the methods ever produced any effect in any of these decrepit Fausts when a strong mental suggestion as to the possible effects of the surgery did not precede its actual performance.

The Cause of Rheumatism

Late in January newspapers carried the announcement that a physician working in a Philadelphia hospital had isolated a new germ called by him *Streptococcus cardioarthritidis* and asserted to be the cause of rheumatic conditions. He had prepared a serum by injecting this germ into a horse and had treated patients with the serum, apparently to their benefit.

The report seems encouraging, yet many of the special investigators who have studied this disease are not inclined to be enthusiastic. Indeed they caution an unusual amount of scientific reserve in accepting the new discovery, pointing to past records as a reason for the delay. Other investigators have isolated other germs in the past and none of those yet found have been established as the specific cause of this disease. Furthermore, the injection of serums or foreign proteins has been found to set up reactions in the body which may be reactions against disease in general rather than opposition to specific infection.

Medical progress in these times results from a careful weighing of evidence for and against new conceptions, new discoveries, new methods of treatment. The greatest critics are not those opposed to medicine in general but those within the medical profession itself, for they realize the importance of absolute fact as the basis of science.

Lo, the Poor Indian

A recent report of the commissioner of Indian affairs to the Secretary of the Interior indicates the increasing scope of health work among these charges of the government. Hospital and sanatorium space for the tuberculous has been enlarged; effort has been concentrated on providing for the care, treatment and education of Indian children, and thousands of Indians have been examined for trachoma and given modern treatment. The birth rate seems to exceed the death rate.

Nevertheless conditions are not such as to warrant the belief that the health problem of the Indians is settled. Dr. Haven Emerson points out that there was an increase in the mortality rate among the Indians in the four years ending 1924, and that the excess of births over deaths in 1924 was only 3 per thousand. Infant mortality in the population at large had a rate of 70.8 per thousand of births in 1924, among negroes of 114.1 and among Indians of 190.7. Negro deaths from tuberculosis were 13.2 per cent of all deaths among negroes; Indian deaths from tuberculosis were 23.18 per cent of all deaths among Indians.

The figures are unescapable. There is still vast need of intensive health work among the 300,000 Indians that are the wards of our nation.

M. F.

TEACHING CHILDREN SEX

THE primary purpose in teaching the child about the sex aspects of life is to promote social hygiene. The foundations of society depend on the effectiveness with which the sex impulses of the child are directed.

"It is in youth that these questions of mature age can alone be settled, if they are ever settled," wrote Havelock Ellis, "and unless we begin to think about adult problems when we are young, all our thinking is likely to be in vain." To the woful lack of fundamental knowledge of sex in children psychiatrists have traced cases of crime, disease, illegitimacy, divorce and prostitution.

Many juvenile delinquencies and minor behavior abnormalities have been shown to be directly caused by some defect in the sexual adjustment of the child to his environment and position in society. Parents have been told, often enough, how high a price society must pay for neglecting to educate children in this fundamental part of life.

What is being done to teach the child?

Authorities are generally agreed that by the end of the grammar school, children should be fully inculcated with a wholesome and respectful attitude toward sex. Many insist that, by the time the children are graduated from grammar school, they should be familiar with the correct habits essential to physical health. They should know the fundamentally simple facts about the sex organs and the processes of fertilization. They should know the respective importance of each of their parents to society.

Certainly the child of high school age should understand the part his sex plays in the development of his personality. By that time he should have formed a never-ceasing respect for girls and women, and should be totally free from sex-consciousness. His knowledge should make it possible for him to devote himself wholeheartedly to his outdoor games and athletic activities. His knowledge, if it is well grounded, should teach him to have a sympathetic interest in his home and in its various relationships.

Who is to teach the child? Who is to build the foundation for a useful manhood, a useful womanhood?

Investigations conducted by the U. S. Public Health Service show how vastly important a

field lies here. For children's first impressions of sexual phenomena come to some of them when they are barely 5 years old; to others anywhere from 5 to 14 years of age.

Few parents seem to be equipped to teach the child successfully. Most parents themselves require instruction to be able to impart facts and methods of sex education to the growing, vividly imaginative child.

Have the ordinary education and training of the average grade and high school teacher qualified her to assume this all-important task? Can the average teacher avoid self-consciousness in discussing a subject that is generally under social taboo? Can she avoid being flippant, avoid skimming over the surface of a serious topic that usually receives humorous or superficial treatment from lay folk?

On questioning 677 college men, investigators found that only 4 per cent of them received their first instruction in sex from their parents. Seventy-nine per cent of them admitted that the impressions they had formed, in and out of school, had proved harmful. Of 751 college men who were questioned, fully 90 per cent benefited by having to revise childhood impressions later in life, thanks to authoritative sources.

Some schools have attempted the task. Some schools try to impart sex knowledge today. Most of them, alas, go about it the wrong way. Only too often, the terror of venereal diseases is held up to frighten the growing child into the "right path," with the result that it often fills him with a disgust and dread of the whole subject. Instead of "garrisoning the mind with nobility"—to quote the fine phrase of James Thomson—some children are hauled mentally over the fire of sexual evil, so misguidedly offered in lieu of instruction.

Here and there, school instruction has been effective. When the curriculum of a Cincinnati girls' school was rearranged to include sex instruction, the classes were taught, not by a teacher, but by a woman physician. The physician is equipped to encourage children to throw aside the greatest bar to the natural acceptance of such knowledge—the bar of secrecy. The physician can authoritatively stress essential, health-forming habits. The physician can teach the child the scientific facts concerned in these problems. The physician alone can surmount the inevitable difficulty which traditional habits of thought and traditionally conventional use of language have created. He can clear away the misunderstandings as to the purpose and methods of this instruction.

Parents, if they are wise, recognize the need of such instruction. If the knowledge is theirs to impart the children should obtain it from them. Let the child learn as gradually as is deemed satisfactory.

Many parents insist that the intimacy of family life is a handicap to the proper instruction of the child in sex matters. The average parent invariably colors his relationship with his child with the emotions of affection or of criticism, but without the disinterestedness that should mark the teaching of sex.

The physician, the teacher, the parent must cooperate to clarify for the child the so-called mysteries of sex. From these "mysteries" must come a healthy, frank knowledge of the facts and a realization of the social importance of such knowledge. In this way the child can be made to walk the road that lies away from the ambushed enemies of the human race, away from disease and away from innocent-seeming yet danger-laden habits. M. L.

A FAR EASTERN HEALTH SERVICE

AGENTS of international health are the cable and the radio. These two modes of transmission are now employed to collect and broadcast news of epidemics in the Far East.

Over that enormous area that extends from Vladivostok and Japan to Cape Town and Port Said, including also Australia, the Singapore bureau of the League of Nations gathers by cable and by radio information on the prevalence of epidemic disease on land and on the movements of infected ships at sea. Of the 100 ports from which reports were solicited, seventy are cooperating and more are being added to the list each week.

Every Friday night from the French station at Saigon, the information gathered is incorporated into a weekly bulletin and broadcast free of charge. From Bombay it is rebroadcast for the Indian ports and for ships at sea and from the Dutch station at Bandoeng it reaches other peoples. Several other distant stations are arranging to relay the bulletins by cable, because of the frequent interference with radio messages through electrical disturbances.

The expense of this health service is met in part by a subsidy from the Rockefeller Foundation and in part by contributions from the countries concerned. Thus also is the Occident served, since, as was pointed out in a recent issue of HYGEIA, modern day contact through travel and commerce makes the health conditions of one nation the immediate concern of every other nation.

This new service is only one step in a movement toward solving other health problems of the Orient. Investigations are being undertaken on endemic centers of cholera, certain aspects of plague and the value of oral vaccination against acute intestinal infection. The importance of these researches is unquestioned, from the point of view both of sanitary administration of the East and of international health.

J. M. D.

LIFE INSURANCE AND THE SAVING OF LIFE

THE prolongation and the saving of human lives are best emphasized from the economic point of view by the consideration given to the subject by the great life insurance companies. With these corporations the prolongation of a life means additional years in which the person concerned will pay premiums and additional years in which the company will be able to retain the funds without paying them back to the beneficiary of the policy.

As pointed out by the president of one of the great insurance companies, Mr. Henry S. Nollen, at the annual convention of life insurance presidents, their association has taken an active interest in the problems of public health and the prolongation of life ever since its establishment twenty years ago. The insurance companies have, moreover, kept statistics of the persons insured, which have been of great value in pointing the way to proper measures for further prolonging human existence. Last year fifty-two legal reserve life insurance companies contributed their records for such study. During the first ten months of 1926 they recorded 270,912 deaths, representing an aggregate of more than 31,000,000 lives covered by their insurance.

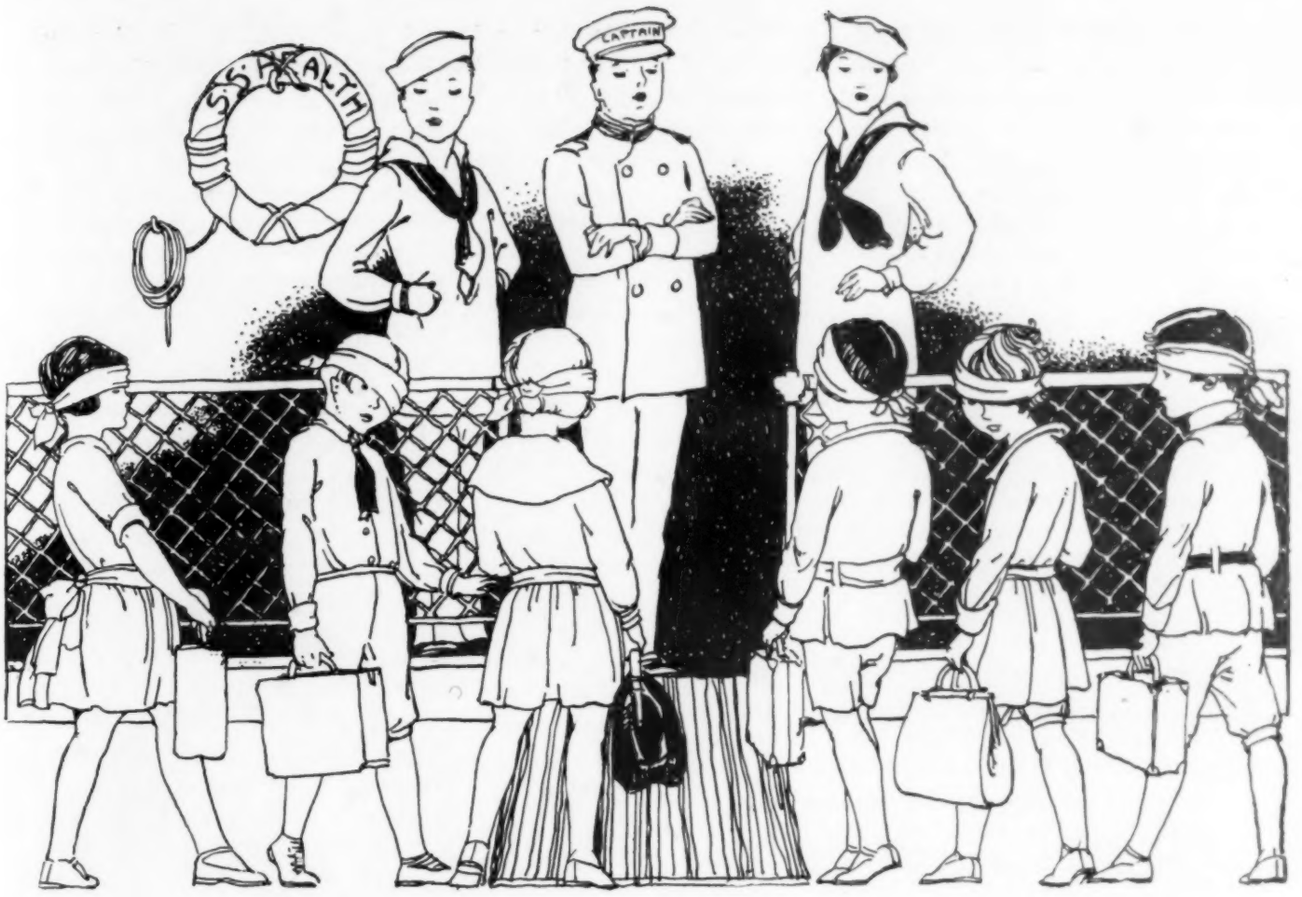
The insurance records, like those of the bureau of census, indicate the greatest number of deaths from organic diseases of the heart. In their records pneumonia ranks second, tuberculosis third and cancer fourth, with Bright's disease fifth and apoplexy sixth. Fatalities resulting from automobile accidents continue to be a large factor in mortality in this country.

Mr. Nollen emphasizes the fact that the insurance companies particularly favor periodic physical examination by physician, dentist and oculist in order to disclose defects in an early stage and to give knowledge of disease in time to effect a cure or to defer the development of more serious diseases. "Herein," he said, "lies the only hope of improvement in the average ratio of premature deaths due to degenerative diseases. Every family should view the physician not as a last resort for cure, but as medical counselor whose function is to make periodic surveys and to aid in maintaining a state of health. This will include the regulation of diet, as well as personal hygiene, and even a proper prescription for the use of leisure and wholesome recreation."

The insurance companies recognize that this great movement for progress must be essentially educational. Already such education is being promoted by all of the agencies in this country interested in health. Indeed, Mr. Nollen cites as evidence of the influence that this campaign of education is having on the growing generation the fact that Louis Pasteur was selected in a voting contest recently held among the high school boys and girls of the United States and Europe as first on the list of those who have contributed most for the world's welfare.

The campaign between forces working for health and those working for disease is unending. The first line of defense against disease consists of the medical profession and its allied workers coordinating their efforts with various government health agencies and with philanthropic groups, which aid in completing the chain of defense by making every individual realize his responsibility and perform his part. Mr. Nollen well emphasizes that every person is a factor in the care of the community health and safety. He urges that every family have a medical counselor to make a periodic survey for the purpose of forestalling rather than curing disease. Such cooperation will bring not only an extention of the limit of human life, but also a standard of human conduct that will minister to health and happiness and to a prolonged useful life.

M. F.



On Board the S. S. Health

A Short Play for Children—*By Lucille Sissman*

CAST OF CHARACTERS

Captain Goodsense	Five Nursery Rhymes
Sensible Sam, the Mate	Two Sailors
Six Headaches	Passengers
Five Colds	

Scene: On board a ship, two life preservers bearing the name *S. S. Health* are prominently displayed. An anchor is seen at the extreme left, and a gang-plank is placed center-front. The Captain and Mate are discovered in the foreground, and the two sailors are in the rear.

Captain *(strutting up and down):*

This is the good ship *Health*
(I am the captain bold),
With a cargo worth untold wealth,
More than its weight in gold.

We are bound for a distant shore
To save many lives, you see.
We carry provisions galore
And every good remedy.

Milk, eggs and fruit in the hold,
Vegetables there are beside;
Nothing that is stale or old
On the *S. S. Health* may ride.

My name is Captain Goodsense,
My mate is called Sensible Sam,
His intelligence is simply immense
Even though he looks like a ham.

Mate *(touching cap):* Aye, aye, sir.

Captain: Are all the passengers on board?

Mate: Not yet, sir.

Captain: We lift anchor in twenty minutes.

Mate: Aye, aye, sir. *(Mate steps to gang-plank, and calls through cupped hands or megaphone.)* All aboard that are going aboard. All ashore that are going ashore.

The Six Headaches come aboard ship, assisted up the gang-plank by the two sailors. The Headaches line up, shoulder to shoulder, on the left side of the stage.

Headaches *(sing to tune of Three Little Maids from "The Mikado"):*

Six little, mean little Headaches are we,
Full of aches and pains, you see.
We've come to make you sick as can be,
Six little Headaches are we.

CAPTAIN: Explain who you are. What is your occupation?

HEADACHES *(together):* We are six little Headaches. Beware of us! You won't like us when you meet us.

FIRST H. *(stepping forward):* I am the first little Headache. I accompany a little boy who needs glasses but will not wear them. I dance in front of his eyes every time he looks at the blackboard. I laugh at him every time he opens a book. He cannot do his arithmetic because the numbers play tricks on him. The only way he can get rid of me is to wear glasses.

SECOND H.: I am the second little Headache. I live in the bedroom of a little schoolgirl. She shares the room with her sister. Both of them refuse to open the windows, especially at night when they go to bed.

They are taught in school to sleep with plenty of fresh air in the room, but they do not pay attention to what the teacher tells them. Every morning they wake up with headaches, because of the bad air they have been breathing during their sleep.

THIRD H.: I am the third little Headache. I make my home in a very pleasant place, right in the center of a pie or a box of candy. Here I wait until some foolish child, just home from school, finds the pie and eats it, Headache included. I really do not feel sorry for him as he has no business ransacking the pantry for sweets, which should be eaten only after meals. He should be content with the buttered bread and the milk that his mother sets out for him.

FOURTH H.: I am the fourth little Headache. I spend most of my time in the Stale-Air Movies. I like to stay there because the air is never changed, the windows are never opened and the sunshine never enters. Badly ventilated buildings, as you know, are the best places for headaches, though the worst places for people.

I am afraid I shall have to move soon. So many people are going to another moving picture house in the neighborhood, which is aired every morning, that the place in which I live will probably be closed.

FIFTH H.: I am the fifth little Headache. Unlike my brother who has just spoken, I thrive best on an empty stomach. Food does not appeal to me at all. I hunt around for children who run off to school without eating any breakfast or for poor foolish grown folk who go off to work the same way. It takes a couple of hours before they know of my presence. Usually, it is not until 10 or 11 o'clock that I am discovered.

I am more feared than any of my brothers as I can cause more intense pain and suffering than they can. The only way to keep me away is to eat substantial meals at regular hours as I cannot abide the smell of food.

SIXTH H.: I am the sixth little Headache. The child who drinks tea or coffee always makes my acquaintance. I wait until he goes to bed and follow him before he has a chance to fall asleep. I sometimes keep him awake at night, and if he tries to doze off, I send him a bad dream to arouse him at once. In the morning I am still with him. He will never banish me from his bedside unless he stops drinking tea and coffee at night.

SIX HEADACHES *(together):* We are six little Headaches. Beware of us! You won't like us if you meet us.

CAPTAIN: You wicked rascals, boasting of all the evil you have done. Mate, what shall we do with them?

Every morning he wakes up with a bad headache, because of the bad air he has been breathing during his sleep.

MATE: Throw them overboard, sir.

CAPTAIN: Very good, sir.

(The two sailors and the mate lead the Headaches to the edge of the ship and throw them overboard. They return to their places, dusting their hands.)

CAPTAIN:

My name is Captain Goodsense,
My mate is called Sensible Sam.
His intelligence is simply immense
Even though he looks like a ham.

MATE: Aye, aye, sir.

CAPTAIN: Are all the passengers on board?

MATE: Not yet, sir.

CAPTAIN: We lift anchor in fifteen minutes.

MATE: Aye, aye, sir. All aboard that are going aboard. All ashore that are going ashore.

The Colds come aboard, and line up in the same way that the Headaches did. They sing to same tune.

COLDS:

Five little, mean little Colds are we,
Full of germs and disease, you see.
To make you sick fills us with glee,
Five little Colds are we.

We are five little Colds. Beware of us! You won't like us when you meet us.

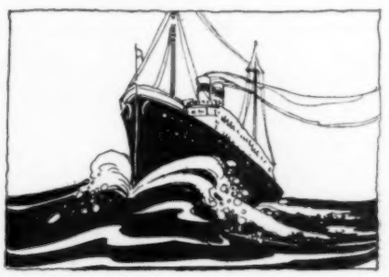
FIRST C.: I am the first little Cold. I spent all last week with a little boy who wears his sweater in his warm classroom. His teacher reminds him almost every day that it is harmful to wear the same wraps indoors and outdoors, but he pays no attention to her. Maybe he will now, though, as he is suffering so many aches and pains that he will probably be more careful in the future.

SECOND C.: I am the little Cold who lives in hallways and doorways and waits for the people who stand or sit in a draft.

THIRD C.: I am the third little Cold. I despise rubbers and galoshes, and when I see boys and girls walk in the snow and rain without them I am filled with glee, as I know they are inviting me to join them. However, rubber footwear is becoming so popular with children as well as with grown folk that I am having a hard time finding careless people to make sick.

FOURTH C.: I am the fourth little Cold. My favorite playground is a diseased tonsil or adenoid, because here I always meet many other germs. However, I have heard that there is a sharp-eyed nurse at the school who looks down the throats of the pupils. She advises the children to have diseased growths removed in order to avoid colds. I am afraid that I shall have to move to a country in which there are no schools.

FIFTH C.: Some people think that colds can only start at either end, the head or the feet, but I start in the middle, the stomach, and I can say with all modesty that I cause more colds than I have ever been blamed for. Fill a car with poor gasoline, and it will give you poor service. Put poor food into a stomach and the human engine will run down and become weakened. Then at the first sniff of bad weather, all the little germs will come out and attack the weakened body, which will be unable to fight them off. Good food, regular habits, and plenty of exercise and rest are the only things that can scare me away.



"Throw him overboard, sir."

FIVE LITTLE COLDS *(together):* We are five little colds. Beware of us. You won't like us if you meet us.

CAPTAIN: You murderous germs, how dare you brag of your wicked deeds! Mate, what shall we do with them?

MATE: Throw them overboard, sir.

CAPTAIN: Very good, sir. *(Mate and two men throw them overboard.)*

CAPTAIN:

My name is Captain Goodsense,
My mate is called Sensible Sam,
His intelligence is simply immense
Even though he looks like a ham.

MATE: Aye, aye, sir.

CAPTAIN: Are all the passengers on board?

MATE: Not yet, sir.

CAPTAIN: We lift anchor in ten minutes.

MATE: Aye, aye, sir. *(Calls)* All aboard that are going aboard. All ashore that are going ashore.

Nursery Rhymes ascend gang-plank.

NURSERY RHYMES:

Five little Nursery Rhymes are we
Sent by Mother Goose, you see,
To teach you all how to healthy be.
Five little Nursery Rhymes.

FIRST NURSERY R.:

Jack Spratt could eat no fat,
His wife could eat no lean;
And still between the two of them
They licked the platter clean.

For Mrs. Spratt served vegetables,
Fresh ones to tempt the taste;
This gave them both such appetites
No food was left to waste.

SECOND NURSERY R.:

"Jack, be nimble, Jack, be quick;
Jack, what keeps you from taking sick?"
"I drink four pints of milk each day,
I spend three hours in outdoor play;
Fresh air, sunshine and milk for me.
From ills and aches they keep me free."

THIRD NURSERY R.:

Thirty white horses
On a red hill;
Now they tramp, now they champ
And now they stand still.

The thirty white horses
Are teeth white as snow;
To keep them that way
We all want to, I know.

So treat your teeth squarely,
Brush them daily with care,
Then they'll faithfully serve you
And remain white and fair.

FOURTH NURSERY R.:

"A dillar, a dollar,
A ten-o'clock scholar,
What makes you come so soon?
You used to come at ten o'clock,
You've even come at noon."

"At ten, eleven, or even twelve,
I used to go to bed;
When morning came they found it hard
To rouse this sleepy-head."

"But now I go to bed each night
At eight, or half-past eight;
I now wake early every morn
And never more come late."

FIFTH NURSERY R.:

Little Bo-Peep has lost her sleep
And can't tell where to find it.
If she were wise
She might realize
That coffee and tea are behind it.

Little Bo-Peep soon found her sleep
When told the reason behind it.
She paid a big price
For a doctor's advice
And had sense enough to mind it.

FIRST LITTLE NURSERY R.: Captain Goodsense, Mother Goose knows that you steer the good ship *Health*. She sent you this steering wheel to make sure that your course would be true and your voyage successful. *(He puts the wheel in place.)* This is the first spoke. It is called NOURISHING FOOD.

SECOND NURSERY R. *(Stepping forward to point it out):* This is the second. It is called FRESH AIR AND SUNSHINE.

THIRD NURSERY R.: This is OUTDOOR EXERCISE.

FOURTH NURSERY R.: This is PLENTY OF REST.

FIFTH NURSERY R.: This is CLEANLINESS.

CAPTAIN: Thank you, thank you all. Now I know our voyage will be successful. Mate, give the last call for passengers.

MATE: All aboard that are going aboard. All ashore that are going ashore. *(Remaining passengers are assisted up the gang-plank.)*

CAPTAIN: Mate, hoist anchor. *(Mate hoists the anchor.)*

MATE: Pull up the gang-plank. *(Men pull up the gang-plank. Captain stands at the wheel. Passengers line up next to him at edge of platform, put their arms around each other's shoulders and swaying in unison to suggest movement of the boat, they sing Auld Lang Syne. They hum the chorus the second time to suggest increasing distance, as the curtain slowly falls.)*

GENERAL DIRECTIONS

To excite interest, the theatrical device of having the actors come from among the audience onto the stage is used with effect in the case of the Headaches, Colds, Nursery Rhymes and other passengers. The gang-plank may be steps or a board placed against the center-front of the platform, if the platform is high enough to warrant it. A sailor stands on each side to assist the passengers. An effective steering-wheel may be made out of cardboard. The platform should be decorated with nautical devices such as life-preservers bearing the name of S. S. Health and a large anchor should be hung conspicuously in the foreground.

New Books *on* Health

Reviews of Interest to General Reader, Parent and Teacher

DANISH EXERCISES

PRIMARY GYMNASTICS. By Niels Bukh (Denmark). First English Edition. Pp. 148. Numerous illustrations. Cloth. Price, $2. E. P. Dutton Company, New York, 1926.

THE title "Primary Gymnastics" is used in the sense of being fundamental to sound development. The book is a translation from a Danish textbook written for the Danish folk high school students (adult continuation school age), having chiefly in mind its use by the men students with a minor consideration for women.

Throughout the book, one is impressed by the author's earnestness of purpose; he has emphasized the importance of early corrective work to overcome the influence of bad habitual and occupational postures.

The primary aim of the book is to bring about a toning up of the entire body through exercises having greater freedom of movement than the usual exercises of the Swedish system. The chief objectives are to provide such types of work as will (1) overcome tension, which is indicated by stiffness of the joints; (2) overcome lack of power due to the poor development of antagonistic muscles, which are used in customary movements only, and (3) develop greater ease and grace of movement.

Nearly every page in the book has one plate containing from three to five illustrations of exercises. Each illustration is numbered to correspond with the exercise described on the same or the opposite page. These aid greatly in working out unfamiliar exercises.

C. B. H.

WHAT'S BEST TO EAT?

By S. Henning Belfrage, M.D. (London). William Wood and Company, New York, 1926.

THIS is the American edition of an English book on nutrition, its chapters dealing with vitamins, minerals, proteins, fuel, digestion, constipation and diet as a cause of disease. The book is written in popular style.

The writer seems at times inaccurate and overenthusiastic as to the power of good nutrition and overzealous in his effort to lay the blame for all ills at the door of constipation. The American reader doubtless will be particularly interested in the practical supplement of the book, which lists a number of foods and recipes not known in this country.

R. L.

OUR OWN AND OUR COUSINS' EYES

By Thomas Hall Shastid, M.D., LL.D. Pp. 32. American Optical Company, Southbridge, Mass.

THIS small volume, which is the substance of a lecture delivered at the Mayo Clinic a year ago, is, as the author states, "an attempt to exhibit the evolution of the eye, so far as possible in language free from technicalities."

Beginning with the lowest form of life, the ameba, which has no eyes, or rather is all eyes, the gradual evolution of the organ of sight is traced through its various changes in the gradually ascending forms of life, in insects, fishes, amphibians, reptiles, birds and mammals, until it reaches its present development in the human eye.

The author even speculates on the probability of a still further elaboration of the human eye to adapt itself more perfectly to the requirements of the changing conditions of life, so that in the course of countless ages "the two human eyes will come closer and closer together, the bridge of the nose will further diminish and sink just as the animal snout in man's line of descent has been doing for vast eons of time, and finally man's two eyes will again become one; just one large central cyclopean eye."

While of especial interest to the ophthalmologist and to the student of comparative ophthalmology, the book cannot fail to awaken keen interest and win the enthusiastic approval of the student of evolution. For a subject on which volumes might be written this brochure is indeed a multum in parvo.

C. P. S.

THE REPRODUCTION OF LIFE

A Handbook of the Science of Reproduction in Nature and Man. By A. J. Cokkinis, B.S., M.B., F.R.C.S., London. Cloth. Price, $3.50. Pp. 287, with 108 illustrations and three plates. Printed in Great Britain. William Wood and Company, New York, 1926.

THIS book is written with the object of filling an important gap in the English literature on reproduction, the gap between the strictly scientific, which is too technical for the ordinary reader, and the mass of literature written for the public, which is too limited in scope, based on inadequate knowledge, or written with insufficient delicacy.

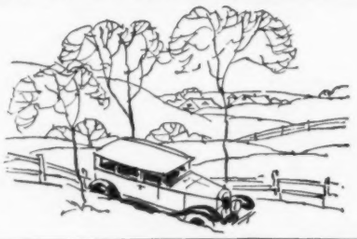
The author has made a real contribution to the literature of this field of biology, a contribution especially needed, as he states, by his British readers. He treats systematically and with considerable detail the process of reproduction in the whole realm of living nature, plant and animal. Animal reproduction is treated fully, each subkingdom being given a chapter, while to vertebrates a chapter is devoted each to birds and to mammals. Human reproduction is given six chapters.

The book has unusually fine illustrations, most of them new and original, only a few being taken with full acknowledgment from other authors.

The author's avowed and evident purpose in his work is to explain to the reader clearly and accurately the whole purpose and process of reproducing new human life in such a way as to establish in the mind of the reader right interpretations of life and high ideals of life so far as concerns that fundamentally important function reproduction.

The author's concise and systematic style, though dogmatic in method, is quite in harmony with recognized practice when the teacher is presenting to a popular audience generally accepted facts long established. But the researches in the field of mammalian reproduction have during the last generation made necessary a complete reconstruction of our interpretations and our teaching concerning life processes. The author might well have cited authorities on recent research.

W. S. H.



News *and* Views *from the Field of Health*

AMERICAN BOYS TALLER THAN GRANDPAS WERE

The American boys of today are at least 2 inches taller than their grandpas were when they were boys, asserts Dr. Horace Gray of the Institute for Juvenile Research in Chicago. Measurements of the heights of over 1,000 boys of American born parents were compared with the heights of boys measured over fifty years ago by another scientist. The increase in height may be attributed to the increasing knowledge of health and disease control, thinks Dr. Gray.

MEASLES SEASON OPENS

The open season for measles is now on, according to the bulletin of the Indiana State Medical Association. While the disease itself may not cause much trouble, it is frequently followed by such serious complications as pneumonia and disease of the middle ear or of the eye.

The control of the disease is difficult because it is often not recognized until the eruption appears, some four days after the onset. Meantime the patient has been continuing at school or work and infecting all his associates. Measles is extremely contagious, and quarantine measures should be strictly enforced.

Persons who have once had this disease rarely contract it again, but measles should be distinguished from the so-called German measles, an entirely different disease.

The disease begins with hoarse, croupy cough, running nose, and inflamed eyes and in general resembles a common cold in the early stage. Widespread epidemics of measles recur about every third year, 1917, 1920 and 1923 being big years.

AMOUNT PAID FOR HEALTH

Last year Americans spent per capita, according to an article in the *Boston Medical and Surgical Journal*, the following sums:

Candy	$10.00
Education	9.00
Police protection	3.50
Cosmetics	.75
Chewing gum	.50
Health	.29

COLDS HAVE HIGH COST

The American public pays in one year $1,000,000,000 for time lost from business due to the common cold, states a bulletin from the Indiana State Medical Association. While these estimated figures may not be accurate, the cold is undoubtedly one of the most expensive luxuries in our superheated, shut-in-the-house lives.

Of course, pneumonia and disease of the middle ear and sinuses are some of the serious and unpleasant consequences of common colds and are reasons for avoiding colds and for trying to cure them when they have proved unavoidable.

This bulletin pictures the March lion shorn of his majesty and power, a wheezy, sneezing, sickly animal, while his companion, the March lamb, is a black sheep from the health standpoint. The changeableness of the weather sponsored by these two beasts is the cause of the greater prevalence of colds at this time of the year.

GREEN LETTUCE HAS MORE VITAMIN

Probably the young son prefers the tender white hearts of the lettuce, but it is the green leafy part that will make him grow tall and strong like father, for that part appears to contain more of the growth-promoting vitamin A, according to some experiments carried on at the Michigan State College and recently reported by Dr. John W. Crist.

PAPERS PRINT HEALTH-RAY FIGURES

Along with the weather report, the London *Times* is now printing a daily number giving the intensity of the ultraviolet rays on the city streets, so great is the popular interest in these health-giving rays.

HOME FOR BABIES GIVES PARENTS NIGHT OFF

Parents of moderate means are almost entirely kept from evening entertainments because of the difficulty of providing adequate care for their children while they are out. To meet this need, in an Australian city an overnight home for well babies has been established where parents, for a small sum, can safely leave their babies for the night. A similar home has been established for week-ends, so that couples may enjoy the change and refreshment of a week-end trip with the assurance that their babies are being carefully tended, according to an account in the *Public Health Nurse*.

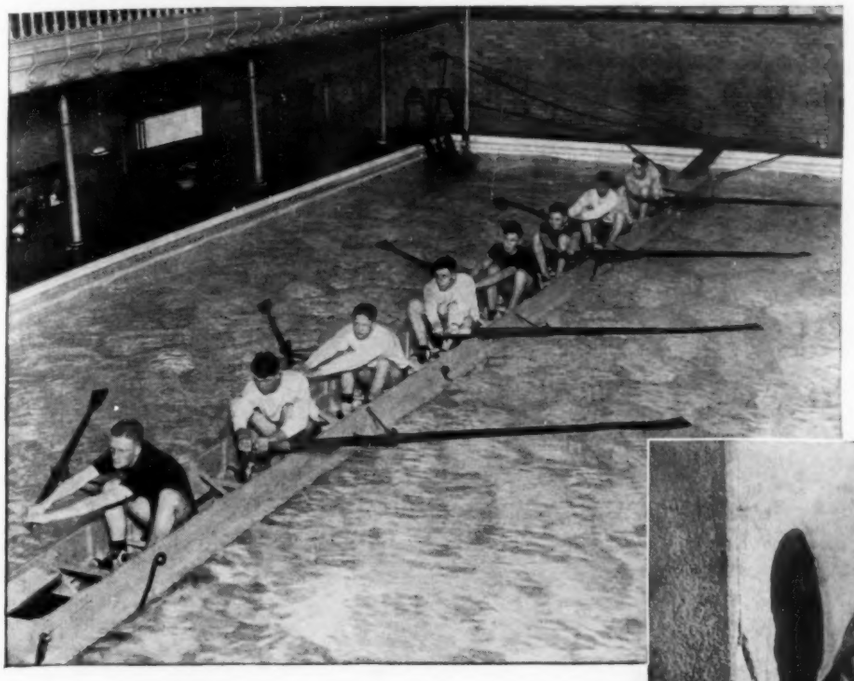
PLANNING CITIES FOR HEALTH

The most popular features in city or regional plans are not those relating to public health, observes Thomas Adams in the *American Journal of Public Health*. Yet such plans should provide a healthier pattern for community growth.

The restriction of areas for business, industry and residence, the restriction of heights and density of buildings and the regulation of traffic and transportation have as great an effect on the public health as they have on the beauty of the city. The matters of water supply and sewage disposal have a most important bearing on the health of the city, of course.

Housing and sanitation require attention when the plans are being made. The evils of congestion must be considered in connection with the fight against social diseases. Parks and recreational facilities must also be planned for if the standards of public health for the community are to be raised.

High buildings should be condemned, not for their height but for the lack of space around them. An increase in respiratory diseases, eyestrain, nervousness and depression has been observed in the people who live and work in these mammoth structures. On the pavements and within the buildings there is insufficient sunlight, diffused light and air circulation, and sterilization of the lower atmospheric areas is prevented.



ROWING INDOORS

Swimming pools may be used for more sports than swimming and diving. Here is the U. S. Naval Academy crew keeping in trim for spring races.

Wide World Photos

DOLL IS ENVOY TO JAPAN

Dolly Betty Lou is the U. S. envoy to the doll festival in Japan. She is supposed to look like a healthy American school girl such as the little lady who holds her. Betty Lou's wardrobe was made by the girls of a California junior high school.

Pacific and Atlantic

AQUAPLANING IS EASY AFTER SWIMMING THE ENGLISH CHANNEL but it is good outdoor exercise all the same, thinks Trudy (on the left).

Underwood and Underwood

HOSPITAL TO TEACH WRITING

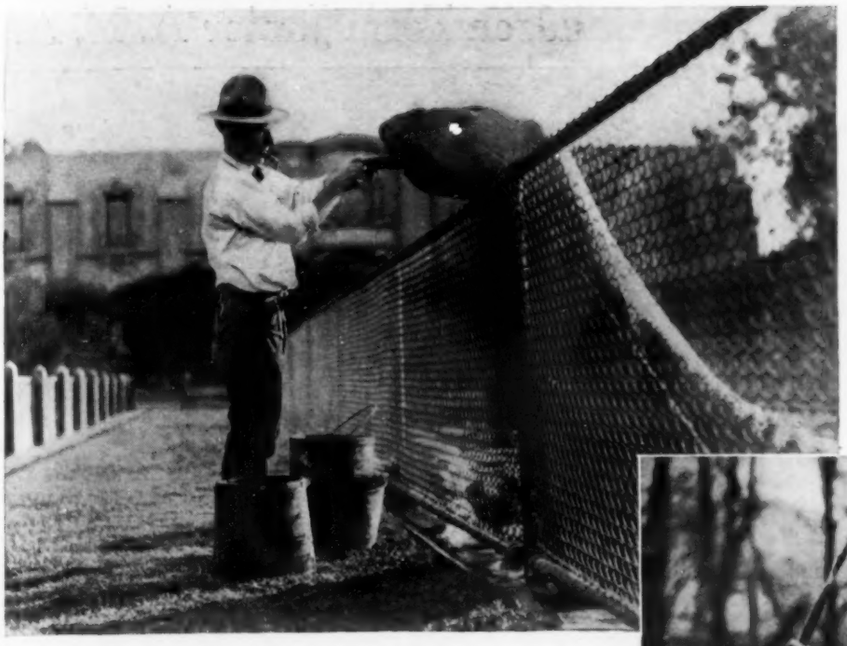
Six year old William thinks this is the correct way to write his name. At a London hospital he is being given treatment so that he will read and write as other folk.

SHOOTING DOWN THE SLIDES

Tobogganing is real sport on a slide like this and the long trudge back to the top furnishes plenty of exercise. The slide runs beneath Quebec's famous old citadel on the St. Lawrence River.

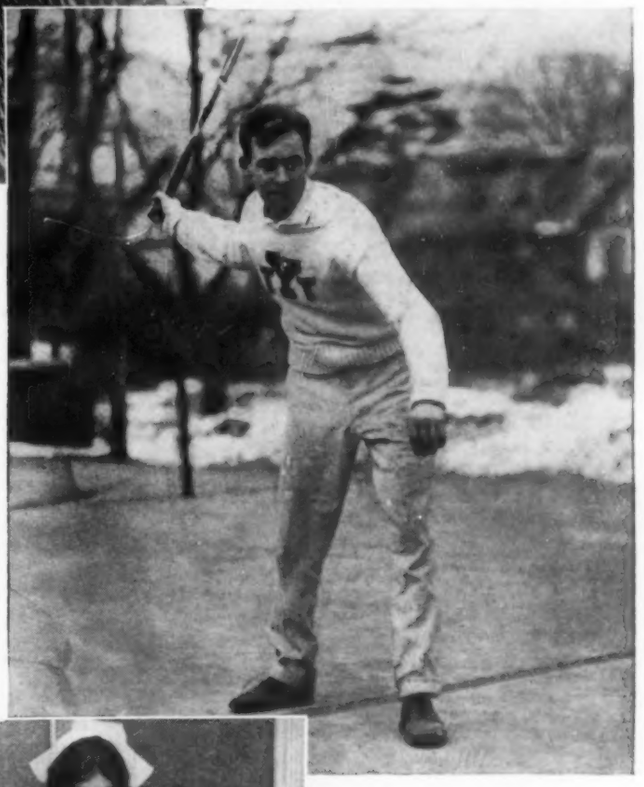
BY WAY OF CONTRAST: WINTER PLAY as it is found on the beaches of Florida.

Photos by Pacific and Atlantic



FEEDING THE ANIMALS

Mr. Elephant Seal eats a hearty breakfast of fish and has brought his weight up to 6,000 pounds. He was brought to the San Diego zoo from his home on a Guadeloupe Island.



TENNIS OUTDOORS IN JANUARY

New Haven's winter climate does not rival California's, nevertheless the Yale tennis team has outdoor tennis practice in January in preparation for the coming matches with the English universities next summer. This man will captain the Yale-Harvard team.

SCOUTS HAVE HOSPITAL

Boy Scouts can be treated free of charge, nor will they lack for company at the official Boy Scout Hospital opened in New York City.

All Wide World Photos

PREVENTING POOR APPETITE IN CHILDREN

A poor appetite in children, that bugbear of many a mother, should be entirely prevented by a system of precautions begun early in the child's life, thinks Dr. C. A. Aldrich, writing in *Mental Health*.

A cold or the slight indisposition that may be the unrecognized beginning of a communicable disease may cause poor appetite in children. At such a time forced eating only results in a fixed psychologic aversion for food from which the patient may recover with great difficulty. The basic principle of Dr. Aldrich's regimen is the prevention of forced feeding of children.

With this as a starting point, mothers and nurses are instructed before the babies are 3 months old that they must not urge their children to eat except under express orders and that a refusal to eat should be reported like any other unusual condition. In this way the condition may be attacked before it has become a habit. Treatment of the first attack usually begins with a reduction in the diet.

Loss of appetite as the result of weaning difficulties is avoided by giving an occasional bottle from birth. All marked changes, as from cereal to vegetable, are made gradually, mixing the new food with the old at first. In order to have the babies always eat all their food, they are put on a minimum diet that will cause a satisfactory gain in weight, and mothers are educated not to consider a rapid gain in weight an index of the baby's health.

The child's appetite should be the guide, in general, as to how much he should eat. He should be taught as early as possible to feed himself and then should be left alone at meal times. If there is a choice between two foods the one that the child likes best should be used most often. Emotional strife at meal times must absolutely be avoided.

VIBRATION CAUSES FATIGUE

Vibration may be considered a real cause of fatigue in industry, declares Nelle Swartz in the bulletin of the New York state department of labor.

The practice of sitting all day on a floor that is vibrating from the speed of machines is tiring, even though the workers say that they get used to it.

This process of getting used to anything has been found, by laboratory experiments conducted by Wundt, to involve an increased intensity of effort that is most favorable for the approach of exhaustion.

School Children Form Junior A. M. A.

Five of these pupils are up to standard weight after drinking milk for three months. The others have gained from 1 to 11 pounds each.

IN the junior high schools of Roanoke, Va., the pupils who are working for good health and hygiene have formed a Junior American Medical Association. Study of the lives of the heroes of medicine has inspired these young people with ideals of service. By means of songs, games, plays, posters, debates and similar methods, they are trying to improve their own health and they are pledged to protect the health of others as well. Prizes were offered to those under weight who brought their weight up to standard by drinking milk.

HOW TO GIVE COD LIVER OIL

To the questions asked by mothers and nurses on how to give cod liver oil, how to disguise its taste, what to do when the child refuses to take it or when the oil upsets the child's digestion the answer is that cod liver oil should be given once daily on an empty stomach when most of the family is at home, asserts Dr. Henry J. Gerstenberger in *The Journal* of the American Medical Association.

Cod liver oil should be given before breakfast and if the child vomits the first dose, a second should be given immediately. If any vomiting does occur, very little oil will be lost and "the mess" will be less troublesome than when the oil is vomited just after the child has had a meal.

Since orange juice should be given daily anyway, it may be given just after the oil but not as a "chaser" or reward. The child must be made to understand that he will get used to the taste of the oil in a week or so. As a matter of example it is sometimes helpful to have the parents take the oil before the child without making any remarks or faces.

DEVELOPING SPOTTED FEVER VACCINE

Careful study of the life history of the tick that causes Rocky Mountain spotted fever has resulted in the development of a vaccine that confers immunity, asserted Dr. Roscoe E. Spencer of the U. S. Public Health Service.

The virus has a dormant stage in hibernating ticks. At this stage it cannot produce the disease but will frequently confer immunization when injected in guinea-pigs. In the spring after hibernation the virus reaches the stage in which a vaccine can be made from it.

PROTECTING PUBLIC FROM STUDENT DRIVERS

In an effort to protect the public and also to give greater convenience to student drivers, Leominster, Mass., has set aside a street for driving instruction. The street chosen is a long, wide, straight highway on the outskirts of the town, where travel is not heavy. The practical advantage of this step has already been proved, says a report of the innovation in the *American City*.

Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Gray Hair

To the Editor:—Is henna hair dye harmless or less harmful than other dyes? Does it benefit the hair or prevent grayness? Will the following preparation prevent grayness: 2 ounces of sulphur and 8 ounces of bay rum?

P. C., Kentucky.

Answer.—Henna is a vegetable dye and much less harmful than mineral dyes. It does not benefit the hair or prevent grayness.

We do not believe any preparation of the sort mentioned will prevent graying of the hair.

Bad Breath

To the Editor:—All my life (I am 17 years old) I have been troubled with bad breath. Lately I have had a bad taste in my mouth all the time. I brush my teeth twice a day and at that time use a mouth wash; lately I have been using milk of magnesia. Whenever I go any place I take soda-mint tablets, but none of these prevent the unpleasant odor in the breath. Train riding, elevator riding and car riding used to make me sick. I know that the cause is not in my mouth. Does what I eat have anything to do with it? My tongue has always been coated white.

V. T., Pennsylvania.

Answer.—Bad teeth, infected tonsils or adenoids, diseases of the nose or of the several sinuses that open out from it, diseases of the lungs, disturbance of stomach and bowels or general conditions may affect the breath. Frequent causes of bad breath are diseases of the nose in which there is much destruction of the tissues and crusting, such as ozena or atrophic rhinitis.

The fact that in this case there is a coated tongue and a bad taste in the mouth makes it probable that some disturbance of the stomach or bowels exists. It is impossible for one to advise intelligently for such a disorder in the absence of a thorough examination and study of the case. The person should consult a good general practitioner who can study the case carefully; if he thinks there is some local trouble that needs the attention of a specialist he will advise it.

Tobacco Habit Cure

To the Editor:—I observe in a recent issue an advertisement about a book, "Siren Voices," and notice that one of the classes of nostrums attacked are the anti-alcohol, antitobacco and antidrug remedies. Could you advise me what is a reliable remedy for the tobacco habit? C. A., Canada.

Answer.—The reason why so many advertised antitobacco and antialcohol remedies are sold extensively is because there is no satisfactory treatment for these habits. Alcohol addicts cannot be successfully treated outside of an institution.

Persons who lack the will power to control their habit for tobacco grasp at any remedy advertised promising a quick cure, and they usually spend considerable money before they discover they have made a mistake.

The cure for the tobacco habit is to quit. Sometimes the application of a silver salt, like argyrol, to the mucous membrane of the mouth is helpful but only for a limited period. Smoking of cubebs and chewing of licorice or gum, which distract the mind, are helpful to a limited degree.

Gelatin

To the Editor:—Why is gelatin given before an operation? Some physicians say that calcium clots the blood, but gelatin contains little calcium. Some say gelatin is given because of the lack of putrefying amino-acid in gelatin.

E. T., Texas.

Answer.—Gelatin administered freely has been found to promote the coagulability, or clotting property, of the blood. Calcium is given for a similar purpose.

Skin Test to Combat Eruptions

To the Editor:—Is it advisable to have a food test taken in order to ascertain just what particular foods cause skin eruptions? How is this test taken; what elements are used?

T. S., Massachusetts.

Answer.—If one is bothered seriously with hives or any skin eruption that seems to be caused by articles of diet, it might be well to have the skin test made with such food substances as have seemed to cause the trouble.

A so-called skin test is simple. It consists in applying a small portion of the suspected substance to a slight abrasion of the skin, which is made like a vaccination scratch. If the person is susceptible to that substance, redness appears on the following day.

Relation Between Chronic Mastitis and Cancer

To the Editor:—Would chronic mastitis (inflammation of the breast) of two years' duration be apt to develop into cancer? The glands of my breasts are enlarged and ache a great deal, the aching extending into my shoulders, arms and sometimes the neck. My arms often feel numb, especially at night or when I raise them. The condition is much worse the week before menstruation. At that time my breasts are very sore and I often have sharp pains. I am 32 years old and have one child of 6. I never had any trouble with my breast prior to two years ago, not even when nursing my baby. Can mastitis be caused by infected gallbladder? I have been thoroughly examined and have no other source of infection. I do have a great deal of soreness in my right side and backache on the right side of my back; also belching, heartburn and other symptoms of gallbladder trouble. Is there any treatment for mastitis? I have tried light (heat) treatments with good results, but the lumps and soreness return about two weeks after treatments are discontinued.

E. M. C., Iowa.

Answer.—The cause of cancer is unknown. Many times cancer develops on the site of a chronic infection or irritation. We know also that in a large percentage of

cases cancer develops in persons who have no history of infection or injury in the part of their body in which the cancer has developed. Cancer does develop at times in breasts that have undergone a chronic inflammatory condition for many years.

The patient's statement that the disturbance in the breast is much worse before menstruation is true of most breast disturbances. A woman with a simple cyst in the breast usually has an increased amount of tenderness before menstruation. This is due to the fact that in many women there is a slight engorgement of the blood vessels of the breast for a short time before the onset of menstruation.

Infection in the breast may be secondary to inflammation of any type in any other part of the body. Mastitis is sometimes associated with acute infections of childhood, such as measles, mumps and scarlet fever. Tuberculosis of the lungs at times gives rise to tuberculosis in the breast. An infected gallbladder might possibly be the source of a secondary infection in the breast, but it would be somewhat unusual.

Concerning treatment of mastitis, moist heat applied to the breast by hot packs in many cases gives relief. The patient has employed a therapeutic lamp, which seems to have eased her temporarily. Suspension of a pendulous breast will sometimes be helpful.

It would be well to make a persistent effort to relieve the mastitis by hot packs before any surgery is advised. If with the continued use of hot packs the physician is satisfied that the breast condition is not improving, but is still showing a progression, and if the inflamed breast is giving so much trouble that it is interfering with activity and is causing undue fear of cancer, then a removal of the infected portion of the breast is justifiable.

Cereal Without Bran or Roughage

To the Editor:—Will you please advise what flour or cereal there is that does not contain any of the bran or roughage of the wheat but does contain all other parts of it? S. P. A., Ohio.

Answer.—There is no such thing as a perfect separation of the roughage of the wheat from the floury part. The closest thing would be a 100 per cent flour or a straight, as it is sometimes called. Such a flour consists of the patent and the first and second clears. This type of flour is not made by the best mills as a regular grade, the second clear always being packed out separately.

The bran, shorts, germ and low grade flours are also removed, although finely divided particles of the roughage find their way into the clears; consequently, a perfect separation is impossible of achievement.

Frankly, we cannot see the advantage of a flour such as is described.

Itching of Skin

To the Editor:—What causes itching of the skin, morbid, weird dreams and throbbing and excitability of the nerves in the case of a person who is not overworked or worried? I particularly notice these things when I am literally loafing. C. Y., Ohio.

Answer.—Itching of the skin is a common complaint and may result from local irritation or from an abnormality of the general system. This and the other symptoms mentioned may come from a variety of causes, and are more apt to be noticed when one's mind is not occupied with other matters of more importance.

Face Bleacher

To the Editor:—I have recently returned from a tropical country where I lived for ten years. The skin of my face has become unusually dark. Can you suggest a face bleacher? There are some patent preparations which negroes use on their faces, but I do not know what they contain and hesitate to use them. K. T., Idaho.

Answer.—There is nothing short of blistering applications that will remove the pigment from the skin and they are not safe. The remedies on the market that claim to do it are inefficient.

If the bleaching is due to tanning from long exposure to sunlight it will get better of itself; if it is due to disease, as is possible in a case like this, its course will depend on that.

Serums for Colds

To the Editor:—In some circles there is an idea prevalent that serum treatment of colds is a cure-all, and as we feel that this is not a true view of this matter, some information from you would assist us in dispelling this idea. However, we are of the opinion, based on information received from some of our leading internists of this city, that there is considerable value in the use of serums in the treatment of colds, as well as a prophylactic measure. F. G. B., Ohio.

Answer.—Vaccines of various sorts containing the forms of bacteria commonly found in association with colds have been employed. The value of these vaccines is uncertain. Some who have used them think they have protective properties; others, perhaps the majority of experienced physicians, have found them of no value for prevention.

As a means of cure, these vaccines are of even more doubtful value.

Low Blood Pressure

To the Editor:—I am an unmarried woman, 40 years old. A recent blood test shows that I am in an anemic condition. My blood count is between 70 and 75 and my blood pressure is 80. I am 5 feet 3 inches in height and weigh between 95 and 100 pounds. Every day when I come home from school I have a slight elevation of temperature, ranging from 99 F. to almost 100. I have no lung trouble. I have had a thorough examination including an x-ray picture of my lungs. Have I primary or secondary anemia? Does anemia cause a slight rise of temperature? Do I tax my strength too much by teaching? V. B., Iowa.

Answer.—By a blood count between 70 and 75 we presume it is meant that the hemoglobin shows 75 per cent of the normal. If this is the case the person can scarcely be said to have anemia. The instruments for estimating the amount of hemoglobin in the blood were standardized by the blood of young men in the German army and the standard is very high. It is generally figured that the standard of normal blood for an American woman is about 80 to 85 of this scale.

It is true that the blood pressure is a little low; this is probably due to the fact that the inquirer's work is exacting. The elevation of temperature can be accounted for in the same way.

It seems probable that the person has taxed her strength in some ways, but she has taken the right course in the matter by having herself carefully examined, including an x-ray examination. She cannot do better than continue under the care of a physician, following closely his advice.

Superfluous Hair

To the Editor:—Is there any preparation that will somewhat kill, weaken or bleach superfluous hair without injuring or unduly bleaching the skin? Does extraction with tweezers increase or stimulate the growth of the hair? M. B., Ohio.

Answer.—Peroxide of hydrogen will, to a degree, bleach the color, especially in fine hairs, and does not usually do harm to the skin. When redness or irritation follows

its use, of course it should be discontinued.

Pulling out the hair does not, as a rule, destroy the hair follicle and so prevent regrowth of the hair. Opinions differ as to whether or not repeated pulling out of hair in this way tends to increase the size of the hair shaft. It probably does not.

Fistula of the Anus

To the Editor:—My husband has had fistulas for nearly one year. His doctor gave him a salve to put on externally and told him to keep the parts clean, which he does. Do you think an operation will be necessary before he is free from them? He has an arrested case of tuberculosis of the lungs. Would the fistulas be of tuberculous nature?

A. S. N., Minnesota.

Answer.—Fistula of the anus is not infrequent among those infected with tuberculosis. Whether or not a particular case can be cured without surgical operation is something that no one can tell without a personal examination. Often when a fistula is of long standing and fails to heal, an operation is required.

Overactive Thyroid Gland

To the Editor:—I am a woman of 49, am extremely nervous and have been suffering from insomnia for fifteen years. At last the doctors have discovered the cause—an overactive thyroid gland, which is poisoning my system; but I have not found one yet who can help me. Do you think I am too old to go to Boston and have the thyroid gland removed or is there any other known treatment for it?

M. T., Massachusetts.

Answer.—Whether or not it is wise to have an operation on the thyroid gland is something that can be determined only by one who has examined the person carefully and made a thorough study of her case. It is probable that her symptoms are due to this cause. The age mentioned would not be a bar to an operation, provided the other conditions are favorable.

Premature Closing of Fontanel

To the Editor:—What effect in your opinion does the premature closing of the fontanel—at the age of 6 to 7 months—have on the normal mental development of a child? We are greatly concerned about the foregoing question because the baby specialist under whose care the child has been placed seemed to consider this a serious matter when he discovered the condition of the skull.

H. M. S., Nebraska.

Answer.—The head normally grows in size long after the fontanels and sutures are closed. Therefore, premature closing of the fontanel, if one is ever justified in using that expression, has probably never any unfavorable effect on the growth of the head or on the mental development of the child.

Fontanels are undoubtedly closing earlier than they did before cod liver oil came into almost universal usage, but no one has ever noted any bad effects from it. It is probably more nearly right to say that they closed too late formerly than that they close too early now.

There is, of course, a condition with which this must not be confused. There is a type of idiocy in which the child is born with a closed fontanel or with a small one that closes very early. Such children have a small, undeveloped brain, and the head is small and the fontanels and sutures close early because the brain does not grow normally. A mere glance at such a child reveals the fact that he is an idiot. It is equally evident that he is an idiot because his brain is too small and undeveloped, and not because the skull is too small or has closed too early.

If a child is mentally normal and has a normal sized head, the closing of the fontanels as early as the sixth or seventh month should occasion no concern.

Bananas

To the Editor:—We are considering the advisability from the standpoint of health of serving bananas to children between 7 and 18 years of age in our school cafeterias. In studying the question we are seeking expert opinion as to the physiologic effect of bananas on the digestive system. We shall appreciate your opinion and any information you may care to furnish on the subject.

W. D. H., North Carolina.

Answer.—Bananas have unfortunately fallen into disfavor because of the effects that follow eating them before they are ripe. Bananas are picked and marketed when green and if sufficient time has not elapsed to ripen them before they are consumed some digestive disturbance is likely to follow.

A banana that is fit for food should have a golden yellow skin spotted with brown. At this stage the skin is very thin. The edible portion should have undergone no fermentation.

Ripe bananas are valuable for the carbohydrate, minerals and vitamin C that they contain. In composition and food value they are similar to potatoes, cooked rice and cereals, for which they may be occasionally substituted in any child's diet. Used with milk or cream, they are a good food. In fact it has been shown experimentally that a diet of bananas and milk is better than one of bread and milk.

With these facts at hand it can be readily understood that ripe bananas are a wholesome food for children.

Twins

To the Editor:—I had been married just four weeks when a neighbor told me that one of a pair of twins is not capable of bearing children. My twin brother is married and his wife is pregnant, so I wonder if I am to be the unfortunate one. I have always been well.

C. D., Michigan.

Answer.—There is no scientific basis for the idea that in human twins one is likely to be sterile. Among cattle a female born twin to a male is, as a rule, a sterile or intersexual individual called a freemartin. There is no reason to believe that the freemartin condition exists in man.

Serum Sickness

To the Editor:—A week ago we had our girl, aged 6½ years, inoculated with scarlet fever streptococcus antitoxin. The work was done by a physician of good standing. The last two or three days she has been suffering from a painfully itching rash, which covers face and body. I am writing to ascertain whether there are cases in which this antitoxin is dangerous to a child, and if so what can best be done to counteract or overcome the condition. We have conferred with our physician but he feels there is no danger from the inoculation and has recommended baths of hot soda water and taking soda in water after meals as well as Epsom salt. Of course we are mainly interested as to whether there is a possible lasting injury to the child from the inoculation.

J. B. S., Illinois.

Answer.—The sickness referred to is what is known as serum sickness and may follow the injection of any of the therapeutic serums now in use, such as diphtheria antitoxin. It is not dangerous to life except in rare instances. No lasting injury follows.

Reinoculation for Typhoid

To the Editor:—I want to know about typhoid vaccine. Four years ago I had a series of three inoculations. Two years ago I had one, as the doctor thought that was sufficient. Would one inoculation be sufficient now, or would I have to take the three inoculations again?

P. A. M., Minnesota.

Answer.—One inoculation of antityphoid vaccine cannot be relied on to establish immunity. Whenever immunization against typhoid

fever is to be undertaken, the three regular doses of antityphoid vaccine should be administered.

A new method for giving certain toxins, such as that of scarlet fever, has been introduced whereby it is claimed that one instead of several doses can be injected for the purpose of establishing a satisfactory immunity to the disease concerned. Thus far, there is no procedure by means of which one dose of antityphoid vaccine may be given in place of the customary three doses.

If, for any reason, there is an unusual likelihood of a person becoming infected with typhoid through occupation or on account of extensive travel, it would be advisable for him to be reimmunized about every two years with the three regular antityphoid vaccine doses.

Constipation

To the Editor:—Is the use of mineral oil for constipation safe? Is it habit forming? Some years ago my doctors advised me to take cascara each night, but I found I had to take more and more to get results. Now I exercise on getting up, drink a glass of water and eat food with roughage. My work during the day is sedentary and although I drink plenty of water, I have only one small bowel movement. Unless I use an aid of some sort a headache comes on. After two days my appetite leaves and I have to take a big cathartic or an enema. I never have trouble on my vacation when I am always active. I walk all I can in the time I have and am perfectly well in all other respects, so I do not want to grow dependent on drugs. What is psyllium? Is it safe to take? I have tried the so-called churning and pumping exercises, but find that I have very dry hard stools. Is this because I have not kept up the exercises long enough?

H. O. C., Massachusetts.

Answer.—Mineral oil is the least objectionable of any of the laxatives and the least likely to result in the formation of a habit. However, there are few persons who cannot get on without any drug of this sort provided they have the right diet, get a moderate amount of exercise and, above all things, establish the habit of going to the toilet at the same hour each day.

One movement a day is ample for the average person and some people get on comfortably who have a bowel movement only once in every two or three days. The harmfulness of not having the bowels move every day has been greatly exaggerated.

Exercises that tend to strengthen the abdominal muscles and indirectly also the muscles of the large intestine are helpful in relieving constipation. There is no reason why they should produce "dry" bowel movements. These are best guarded against by the ample use of liquid substances.

The seeds of the plantago psyllium have been used for some time in constipation, especially in France. They are not unlike flaxseed and their action depends on their capacity for absorbing moisture and adding to the bulk of the bowel content. They serve much the same purpose as agar.

Knock-Knee

To the Editor:—I am a boy 16 years of age and am knock-kneed. I should like to know if there is any way to correct the trouble.

M. P., Utah.

Answer.—There are recognized operations for knock-knee, but there is always some risk about the results of such operations and unless the condition is so extreme as to be a serious deformity one should hesitate.

The best thing to do is to consult a wise and experienced surgeon and to abide by his advice. If he thinks the operation can be done so as to insure a much better condition of the legs and without much risk, then we should advise that it be done.

Remodeling the Nose

To the Editor:—Am I to understand that you do not believe in plastic surgery for making a very large nose smaller?

H. S., Massachusetts.

Answer.—In certain cases of deformed nose a surgical operation might be justifiable, but there is always some risk about a plastic operation of this sort and one is foolish to subject herself to such an operation unless the deformity is serious and the resulting risk of making the matter worse not too great. One should consult the best surgeon to be found.

Resistance Defined

To the Editor:—I am a constant reader of HYGEIA and feel that I not only get enjoyment out of it, but also knowledge. While reading an article on "Boils" by Norman Tobias in a recent issue, I noticed that he uses the term "lowered resistance." Is there a scientific basis for this expression? Do doctors use this phrase, or is it a popular expression used by the laity?

M. McN., Arizona.

Answer.—The term "resistance" in connection with infection has been in general use by medical men for several years. However, it seems not to have found its way into most of the dictionaries.

The recent edition of a widely used medical dictionary defines vital resistance as "the resistance of the individual to the untoward effects of bacteria, infections, fatigue, etc." Another medical dictionary under the word "resistance" speaks of a specific type known as "Issaeff's Power of Resistance, a temporary power of resistance to inoculation by virulent cultures of bacteria conferred by the injection of various substances such as salt solution, urine, serum, etc."

The word "resistance" is commonly used, however, in a broader sense than this. It means the ability of the body to resist the invasion of bacteria. In this sense it is essentially the same as "immunity," which is a more definite and satisfactory expression.

Underweight; Hemorrhoids

To the Editor:—I am 22 years old, 5 feet 10 inches tall and weigh about 123 pounds. I have always been underweight. Our family as a whole is tall and slender, each member being underweight. Since my youth I have been troubled with constipation and consequently have hemorrhoids, which have not bothered me to any extent until this fall. My doctor advised treatment to stop the bleeding, but I am still bothered with them. He now advises their removal by operation. Will this remove them forever, provided I take care of the constipation difficulties? Would taking cod liver oil or olive oil aid me in gaining weight?

G. S. G., Indiana.

Answer.—It seems probable that the light weight is a family trait. As long as a person continues in good health and is enjoying life, this condition is not a thing to worry about.

If the hemorrhoids bother constantly, we should certainly second the physician's advice that they be removed by operation. There is little likelihood of their returning if the operation is skilfully done. They doubtless are an important element in the constipation. On the other hand, the constipation aggravates the hemorrhoids. It is a vicious circle.

HYGEIA has reprints of an article on how to gain weight.

Abdominal Band

To the Editor:—Can a stomach support be worn without harm to any of the organs of the body?

W. F. McK., Maryland.

Answer.—An abdominal band or binder can be safely worn if it adds to the comfort of the wearer, and if it is not drawn too tight it will do no harm to the other organs.